



Recreational Use and Resource Analysis of BLM Lands Within the Madison River Corridor



by Donald Baty
Bureau of Land Management
Butte District Office

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Lands Within the Madison
River Corridor

by
Donald C. Baty

October 1977

Cover: Fishing the Madison
Photo by Glenn Law

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Acknowledgments

This study was very much a joint effort and could not have been accomplished without considerable assistance from a number of agencies and individuals.

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The methodology and format for this study are based on a study of the Lower Blackfoot River done by Gerald T. Walker in 1976. Finally, a special acknowledgement to the gracious cooperation of the recreationists on the Madison River who participated in the study, and to Andy Epple, my fellow WICHE intern, and partner in crime.

Abstract

This report presents the results of a study that was undertaken in order to ascertain the amount and patterns of recreation use occurring on BLM lands within the Madison River Corridor.

A total of 26,000 recreational visits are estimated to have occurred on BLM lands within the study area between July 1 and September 5 of 1977. The large majority of recreationists observed were non-residents with roughly one third coming from California and the rest coming from a mix of States and Canadian Provinces. For most of the recreationists contacted the Madison River was a major destination. The primary activity was fishing though a substantial amount of recreational floating was observed in the Lower Bear Trap area. The overwhelming majority of recreationists contacted felt that access to the Madison River and recreation facilities in the area are adequate. The study indicates that very few recreationists are aware of the BLM, or BLM management efforts. Many of the recreationists contacted were concerned about the social and biological carrying capacity of the Madison.

The report indicates that most of the developed BLM recreation areas are being under-utilized. More signs are recommended in order to indicate the presence and location of the areas, and in some instances it is suggested that facilities be removed. Many areas are identified where it is suggested that roads be either maintained or closed to all motor vehicles in order to prevent further resource damage. Immediate action is recommended to alleviate hazards in the Upper Bear Trap area.

Table of Contents

Acknowledgments - Abstracts	Page
I. Introduction	1
II. The Resource	3
A. The Upper Madison	3
1. Quake Lake to McAtee Bridge	3
2. McAtee Bridge to Ennis	5
3. The Channels	5
B. The Lower Madison	8
1. The Upper Bear Trap	8
2. The Bear Trap Canyon Primitive Area	8
3. The Lower Bear Trap	8
III. Research Methodology	11
A. Use Estimation	11
B. Formulation of the Questionnaire	13
C. Interview Technique	14
IV. The Data	15
A. Amount of Recreation Use	15
B. Responses to the Questionnaire	27
V. Conclusions	38
A. The Five Areas of Concentrated Use	38
1. West Madison	38
2. South Madison	39
3. Upper Bear Trap	41
4. Lower Bear Trap	47
5. McAtee Bridge	47
B. The Grazing Allotments and BLM Ennis Lake Boat Launch	50
1. The Allotments	50
2. BLM Ennis Lake Boat Launch	53
C. General Conclusions for all BLM Lands within the Study Area	54
D. The River	55

	Page
VI. Recommendations	58
A. The Four BLM Areas of Concentrated Use	58
1. West Madison	58
2. South Madison	58
3. Upper Bear Trap	58
4. Lower Bear Trap	59
B. The Grazing Allotments and BLM Ennis Lake Boat Launch	59
1. The Allotments	59
2. BLM Ennis Lake Boat Launch	60
C. General Recommendations for all BLM Lands within the Study Area	60
D. The River	60
APPENDIX A: The Observation Sheet	62
APPENDIX B: The Questionnaire	63

List of Figures

	Page
1. Location of study area.	2
2. The Resource: Quake Lake to McAtee Bridge	4
3. The Resource: McAtee Bridge to Ennis Lake.	6
4. The Resource: The Lower Madison	9
5. West Madison Recreation area.	17
6. South Madison Recreation area.	18
7. The Upper Bear Trap area.	19
8. The Lower Bear Trap.	20
9. BLM Grazing Allotments between Quake Lake and McAtee Bridge.	24
10. BLM Grazing Allotments between McAtee Bridge and Ennis Lake.	25
11. BLM Grazing Allotments in the Lower Bear Trap area.	26

List of Tables

	Page
1 - Use Estimator for the four BLM areas of Concentrated Use.	16
2 - The number of observed vehicles in the developed BLM recreation areas.	21
3 - The number of boats launched at McAtee Bridge.	22
4 - The number of rafts and inner tubes observed in the Lower Bear Trap area.	22
5 - Minimum average daily recreational visits for each Grazing Allotment within the study area.	23
6 - Residence of recreationists on the Madison River.	28
7 - Origin of non-residents by State.	28
8 - Transportation mode.	30
9 - Destination of recreationists.	30
10 - Average length of trip and length of stay in area.	31
11 - Type of shelter.	31
12 - Primary activity engaged in by recreationists.	32
13 - All Madison Recreationists interviewed who were with an outfitter compared on seven variables to recreationists not with an outfitter.	32
14 - The average daily expenditure per person.	34
15 - The average daily expenditure per person. Recreationists with outfitter compared to recreationists with no outfitter.	34
16 - Dislikes.	36
17 - Percent of recreationists aware that they were on BLM lands.	36

CHAPTER I

INTRODUCTION

The purpose of this study was to determine the amount and patterns of recreation use occurring on lands administered by the Bureau of Land Management within the Madison River Corridor. Since the BLM lands are scattered throughout the river corridor, the recreation patterns on the BLM lands cannot be separated from recreation patterns in the entire area. Therefore, the study of recreation patterns occurring on BLM lands was done in the context of the entire Madison River Corridor within the study area.

The study was conducted during the Summer of 1977 by a graduate student intern. Funding was provided through the Western Interstate Commission on Higher Education (WICHE), while facilities, resources, and direction were provided by the Bureau of Land Management, Dillon Resource Area Office. A similar study was carried out simultaneously on other lands within the Dillon Resource Area by another WICHE intern.

CHAPTER II

THE RESOURCE

The study area is that portion of the Madison River corridor that lies within the Dillon Resource Area of the Bureau of Land Management. The northern boundary of the study area is the point at which State Highway 289 leaves the river enroute to the City of Bozeman, and the southern boundary is Quake Lake. There are approximately 70 river miles within the study area. The entire study area lies within Madison County. Madison County has a total population of 5,900 people with approximately 1,180 people living in the Madison Valley. The largest town in the area is Ennis with a population of approximately 500 people.

Roughly 49 percent of the river frontage within the study area is in private ownership. An additional 40 percent of the river frontage is land administered by the Bureau of Land Management, six percent is administered by the U.S. Forest Service, and five percent is administered by the State of Montana.

There are two distinct parts of the Madison River within the study area. In this report they will be referred to as the Upper Madison and the Lower Madison. For the purposes of this report, the Upper Madison is considered to be the section of river between Quake Lake and Ennis Lake. The Lower Madison is the section of river between the dam that forms Ennis Lake and the point at which State Route 289 leaves the river enroute to Bozeman.

A. The Upper Madison

As recreation patterns along the Madison are analyzed, three basic parts of the Upper Madison evolve. They are Quake Lake to McAtee Bridge, McAtee Bridge to Ennis, and the Channels -- the five mile stretch of river between Ennis and Ennis Lake.

1. Quake Lake to McAtee Bridge

The 28 miles of river from Quake Lake to McAtee Bridge are the most developed within the study area. Seven bridges span the river in this section, including the McAtee Bridge. There are four public campgrounds along the river in this section; two are administered by the U.S. Forest Service, and two, the West Madison and South Madison Recreation areas, are administered by the Bureau of Land Management. There are also three Montana Fish and Game fishing access sites, and a highway rest area. In addition to the public campgrounds, there are three private resorts that offer both cabins and a trailer park, and two resorts that offer only cabins.

More development is presently being planned for this section of the river. Twenty acre ranchettes are being offered for sale along the river immediately south of the Reynolds Pass Bridge and at the "Big Bend" just north of the Cliff Lake Bridge.

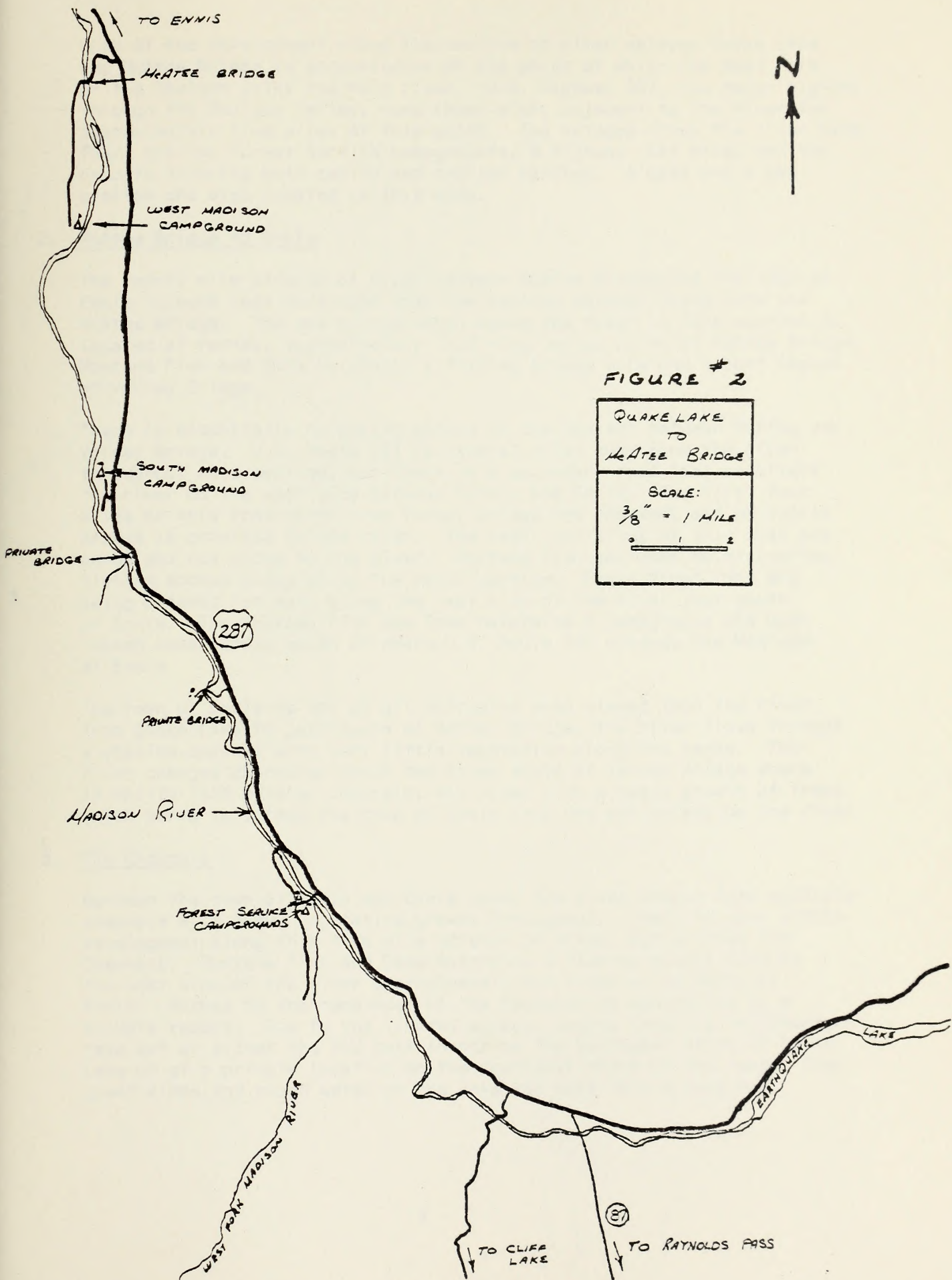


FIGURE # 2

QUAKE LAKE
TO
HEATEE BRIDGE

SCALE:

$\frac{3}{8}" = 1 \text{ MILE}$

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Much of the development along the section of river between Quake Lake and McAtee Bridge is concentrated at the point at which the West Fork of the Madison joins the main river. U.S. Highway 287, the major highway through the Madison Valley, runs immediately adjacent to the river for approximately five miles at this point. Two bridges cross the river here. There are two Forest Service campgrounds, a highway rest area, and two resorts offering both cabins and trailer parking. A cafe and a gas station are also located in this area.

2. McAtee Bridge to Ennis

The twenty mile stretch of river between McAtee Bridge and the town of Ennis is much less developed than the section between Quake Lake and McAtee Bridge. The one bridge which spans the river in this section is located at Varney, approximately 11.5 river miles north of McAtee Bridge. Montana Fish and Game maintains a fishing access site and a boat launch at Varney Bridge.

There is essentially no public access to the Madison between McAtee and Varney Bridge. U.S. Route 287 is several miles away from the river throughout this section, but there is a secondary road that parallels the river on the west side between Varney and Ennis. The first four miles of this road north from Varney Bridge are unpaved, and no public access is provided to the river. The last four miles of this road are paved and run close to the river. Montana Fish and Game maintains two fishing access sites along the paved section. River front lots are being offered for sale along the west side of the river just south of Ennis. The Montana Fish and Game maintains a campground and boat launch immediately south of where U.S. Route 287 crosses the Madison at Ennis.

The town of Ennis is not at all obtrusive when viewed from the river. From Quake Lake to just south of Varney Bridge, the river flows through a shallow channel with very little vegetation along the banks. The river changes character about two miles south of Varney Bridge where it splits into several channels, all lined with a heavy growth of trees which serve to screen the town of Ennis from recreationists on the river.

3. The Channels

Between the town of Ennis and Ennis Lake, the river breaks into multiple channels with heavy vegetative growth throughout. There is very little development along this five mile stretch of river, aptly named the Channels. Montana Fish and Game maintains a fishing access site on the east side of the river approximately two river miles north of Ennis. Access to the remainder of the Channels is controlled by a private resort. Due to the limited access, people floating the Channels take out at either the BLM boat launch on the southwest shore of Ennis Lake or at a private location on the southeast shore of the lake. Frequent winds and rough water on the lake can make this a long row.

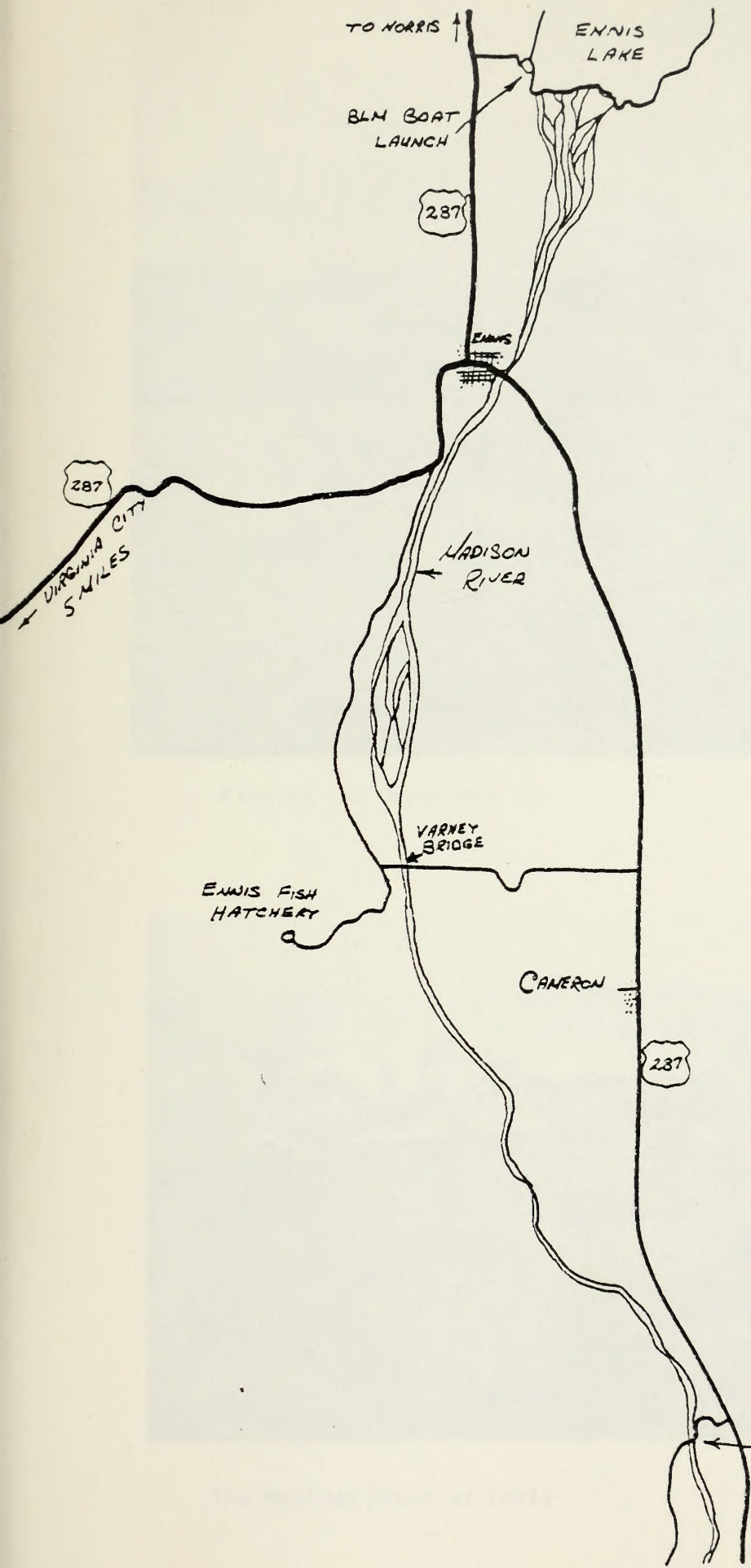
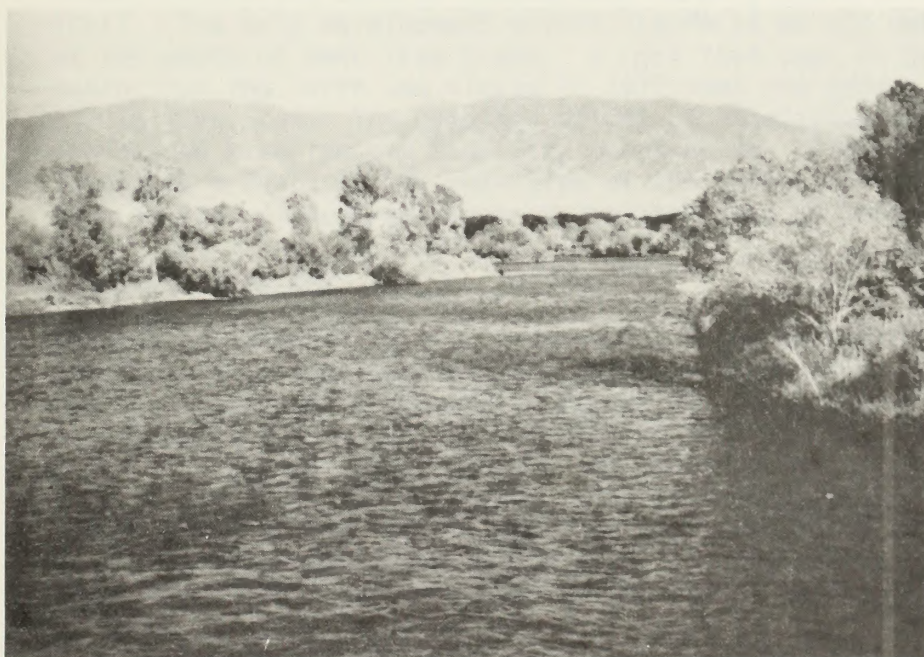


FIGURE 3

McATEE BRIDGE TO ENNIS LAKE
SCALE: $\frac{3}{8}" = 1 \text{ MILE}$



Fishing the Upper Madison



The Madison River at Ennis

B. The Lower Madison

The section of the lower Madison River within the study area can also be broken down into three separate recreation areas. They are the Upper Bear Trap, the Beartrap Primitive Area, and the Lower Bear Trap.

1. The Upper Bear Trap

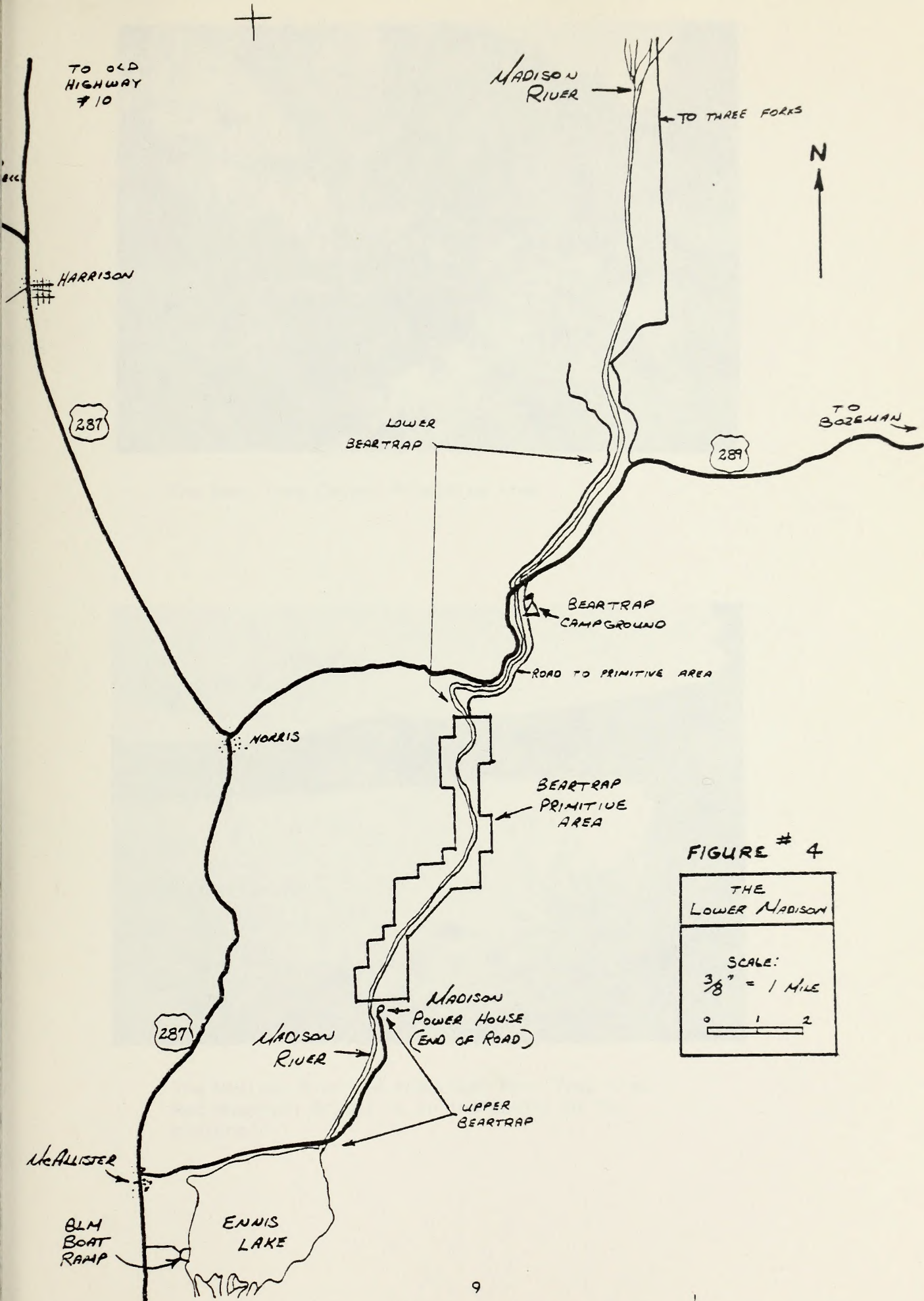
The Upper Bear Trap contains approximately three river miles of land which was withdrawn from BLM administration for construction of the Montana Power Company's Madison Power Plant. Access to this area is across a County owned bridge on the north end of Ennis Lake at the mouth of the Bear Trap Canyon. A road that is maintained by the Montana Power Company runs along the east side of the canyon. The first 2.3 miles of this road runs along a section of Ennis Lake within the Bear Trap Canyon until it reaches the Madison Dam. The road continues on for 1.4 miles below the dam until it ends at the Montana Power power plant. The trailhead for the south end of the Bear Trap Canyon Primitive Area is located immediately north of the power plant.

2. The Bear Trap Canyon Primitive Area

The Bear Trap Primitive Area is the least developed section of the Madison River within the study area. It is a 7.3 mile section of river where the river has cut a 1,500' gorge through the Madison Range. It is fast, white-water very unlike the broad shallow riffles that typify the rest of the river within the study area. The Bureau of Land Management is currently managing the 3,639 acres within the Bear Trap Canyon to protect its primitive values. No motorized vehicles are allowed within the Primitive Area (PA). BLM maintains a trail that begins at the Montana Power plant at the south end of the PA and runs for approximately 8 miles on the east side of the river. There are several undeveloped camping spots along the trail. The only development within the PA is an old cabin located at the mouth of Bear Trap Creek. A road that used to come into the cabin from the north was closed in 1972 when the canyon was made a Primitive Area. The combined effect of vegetative growth and rockslides make the old road very unobtrusive. Fishermen have developed a trail on the west side of the river. This trail begins at the Hot Springs Creek at the north end of the PA.

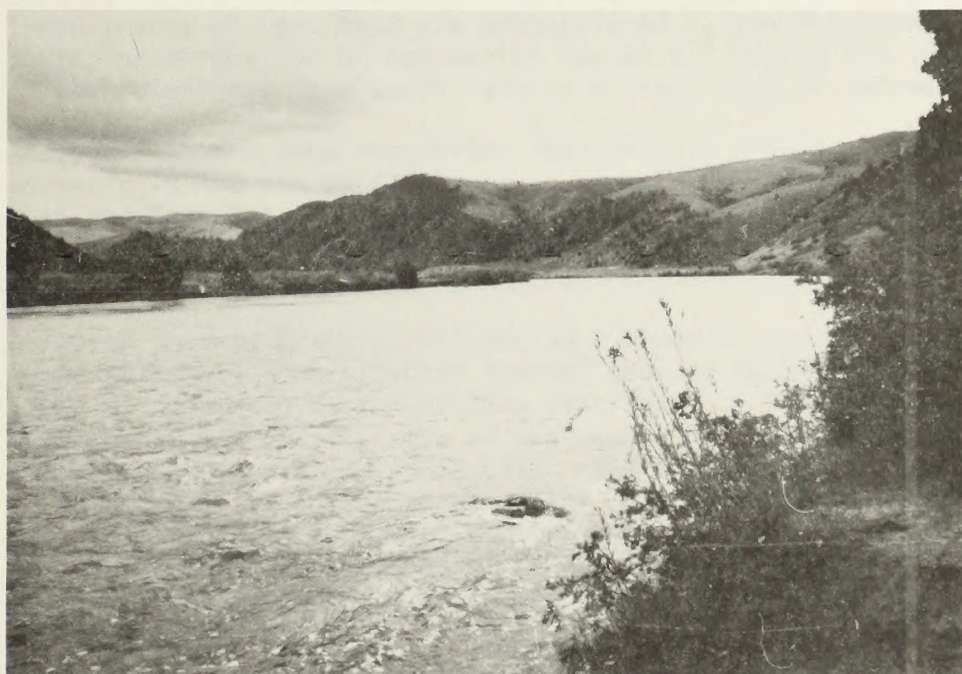
3. The Lower Beartrap

For the purposes of this report the 7.2 miles of river between the Primitive Area trailhead and the point at which route 289 leaves the river enroute to Bozeman is termed the Lower Bear Trap. There are roads on both sides of the river at this point. Route 289 joins the river at Hot Springs Creek and travels north on the west side of the river for 2.6 miles until it crosses the river at the Red Mountain Bridge. Route 289 then continues along the east side of the river until it leaves the river enroute to Bozeman. An unpaved road that provides access to the Bear Trap Primitive area runs





The Bear Trap Canyon Primitive Area



The Madison River in the Lower Bear Trap Area.
Red Mountain Bridge is in the center of the
picture.

south along the east side of the river from Red Mountain Bridge for 3.4 miles. An unpaved road also runs north from Red Mountain Bridge on the west side of the river. The first 3.5 miles of this road is open to public use.

Approximately 75% of the land in the Lower Bear Trap Area is administered by the BLM. There are undeveloped camping spots scattered along all the roads in the area. In addition to the undeveloped spots, BLM maintains the Red Mountain Campground and Picnic Area just south of the Red Mountain Bridge on the east side of the river.

Two major factors influence recreation patterns within the Madison River Corridor. The first factor is the proximity of the Madison River Corridor to Yellowstone Park and other scenic and historical attractions such as Lewis and Clark Caverns, and the historic mining town of Virginia City.

But even more important than the central location between various attractions is the national fame of the Madison River as a trout stream. The interrelationship between recreation patterns on the Madison River and fishing cannot be over-emphasized. Changes in fishing regulations and in fishing opportunities can completely change recreation patterns in the whole Madison Valley. For instance, during the entire fishing season of 1977 the Montana Department of Fish and Game had a six mile stretch of the river closed to all fishing. The three tracts of land that are administered by the BLM within the research area received no recreation use at all during the 1977 season, while ordinarily, they would receive a great deal of recreation use.

Another Fish and Game regulation that greatly affects recreation patterns is the ban on fishing from boats. For the last 7 years, Fish and Game has alternated the areas in which the Madison could be fished from a boat. One year it will be from Quake Lake to McAtee Bridge, and the next year from McAtee Bridge to Ennis.

A factor that is greatly influencing recreation patterns on the Lower Madison is the apparent thermal heating of Ennis Lake. Studies undertaken by the Montana Department of Fish and Game indicate that there is a 10°-12° rise in the weekly mean temperatures of the Madison River below Ennis Lake. The highest temperatures seem to be unfavorably affecting trout growth in the Madison River below the dam. Fishing reports issued during the summer of 1977 reported fishing in the Lower Madison as being slow, with heavy growth of moss in the river. Reports such as this have a great influence on recreation patterns along the Madison.

RESEARCH METHODOLOGY

The researcher had two basic tasks to accomplish in order to carry out the objectives of this study. The first task was to develop a sampling plan that would allow the researcher to make an accurate estimate of the amount of recreation use occurring on BLM lands within the study area. The second task was to develop a questionnaire and interview techniques that would allow the researcher to gather information about user characteristics and preferences.

A. Use Estimation

Much of the recreation use occurring on BLM lands within the study area is concentrated in, and around, those areas that BLM has designated as recreation sites; the Red Mountain Recreation Area, the West Madison Recreation Area, and the South Madison Recreation Area. Concentrated recreation use also occurs in the Upper Bear Trap Area, the BLM land that has been leased to the Montana Power Company for power development. During the summer season of 1977, there was also heavy floating use on the Madison River between McAtee Bridge and Varney Bridge. Approximately 39% of the river frontage along that section of river is land administered by BLM.

It was decided to concentrate data collection efforts in the five areas of known heavy use: Red Mountain (the Lower Bear Trap), West Madison, South Madison, the Upper Bear Trap, and McAtee Bridge (the launch site for the McAtee-Varney float).

Sampling was conducted on 45 days during the season according to a predetermined schedule. Each area was sampled for approximately eight hours on any given sampling day. During the period that the area was sampled all recreation users were counted and recorded on an observation sheet. A copy of the observation sheet appears in Appendix A. In most cases, the areas were sampled from 8 to 4 p.m. In that way most of the day users and almost all of the overnight users were recorded since overnight campers generally do not leave the areas before 8 a.m. Some day use occurring after 4 p.m. may have been missed. The Upper Bear Trap Area was sampled from 12 p.m. to 3 p.m. because there was very little camping use and a great deal of evening fishing activity. Each of the five areas was sampled nine times; once on each day of the week, and twice on each weekend day. The sampling days for any given area were spaced throughout the season. The weekday and weekend averages were computed from the dates the sites were observed. These daily averages were multiplied by the total number of weekdays (45) and weekend days (22) within the period (July 1 through September 5) and added together for a summer total for each of the areas.

The rest of the BLM lands within the Madison River Corridor do not receive enough recreation use to justify spending an entire day in the area. But in order to get some idea of the amount of recreation use these areas were receiving, all BLM lands within the study area were checked periodically throughout the summer. Each time an area was visited, the date, day of week, time of day, weather, number of vehicles, and activity participation (if observed) was recorded. These areas were not sampled for an entire 8 a.m. to 4 p.m. period.

Therefore, the figures arrived at from these random checks are minimum daily use figures, reflecting only the minimum number of recreationists using the area during a given day. All but one of the areas which receive light recreation use are BLM grazing allotments.

There are fourteen BLM grazing allotments within the study area. Seven of those allotments are adjacent to the 5 areas of concentrated use, and use figures were gathered on these allotments at the same time they were being gathered at the areas of concentrated use. Two of the allotments were in an area that was closed to all fishing during the 1977 season and therefore they did not receive any recreation use. An additional allotment was not checked because there is no access to it. That leaves four grazing allotments that were checked for recreation use on the periodic basis described above. In addition to the grazing allotments, the BLM boat launch on the southwest shore of Ennis Lake was also checked on the same periodic basis. In this manner, all recreation use occurring on BLM lands within the study area was observed.

B. Formulation of the Questionnaire

A copy of the questionnaire is printed in appendix B. The questionnaire was administered by the interviewer and could take as little as five minutes to complete, but since some of the questions were designed to elicit broad responses about management direction and user preferences, many of the interviews went on for half an hour or more. The questionnaire was designed to be as short and simple as possible, while still obtaining the needed responses. The questionnaire was used not only on the Madison River but also for a similar study being conducted in other parts of the BLM Dillon Resource Area. Whenever (area) appears in the questionnaire, it is intended to mean the Madison River.

The purpose of many of the questions is obvious. Question 1 (origin of trip) was recorded by State for non-residents, and by County for Montana residents. The number of vehicles observed, rather than people, was recorded on the observation sheet. The average number of people per vehicle was computed from question 3 of the questionnaire and multiplied times the total number of vehicles observed in order to produce a figure for the total number of recreationists. Question 4 was designed to ascertain the relationship of recreation use on the Madison to Yellowstone Park and other scenic and historical attractions in the region. Responses were recorded in three categories; whether the Madison was the primary destination of the trip, one of multiple destinations, or just a stopping spot enroute somewhere else (traveling through).

Questions 5, 6, and 7 taken together (total length of trip, days in Montana, days on the Madison, and days at specific interview site) serve to indicate what percentage of the total recreational trip was spent on the Madison. Question 10 was only of importance at McAtee Bridge where most of the interviewees were floating the river with a guide. Question 11 was basically designed to breakdown economic expenditures in order to help the interviewees answer question 12 (total trip expenditures) and question 13 (expenditures in Montana). It also provides a general indication of the kind of items recreationists are spending money on. Question 12 and 13 were used to ascertain the average expenditure per day per recreationist. When multiplied times the total number of recreationists, this figure gives an indication of the economic value of recreation use on BLM lands within the Madison River Corridor. Question 14 elucidates the number of people on the river who are returnees, and it also enables the researcher to compare the difference in responses between long term users of the Madison and people visiting the area for the first time. Question 15 was designed in order to determine if recreationists felt there should be more, or perhaps less, fishing access to the Madison River. When used at McAtee Bridge, question 15 was used to determine whether or not floaters thought there should be more, or less, boat launching sites on the river.

Question 17 (likes) was basically a lead in for question 18 (dislikes). These two questions taken together were perhaps the most important on the questionnaire. Interviewers were encouraged to list any particular assets, or problems, they saw on the Madison. When the question was designed, it was known that there were some conflicts on the river, such as between bank fishermen and boats. But rather than lead the questions by asking anything specific about a bank fisherman/boat fisherman conflict it was decided to ask an open ended question. If any real problems exist, the dislike question should have revealed them. Question 19 backs up the dislike question. If an interviewee indicated they would not return they were asked why. Questions 20, 21, and 22 were designed in order to ascertain how aware recreationists were of the BLM and BLM recreation management efforts.

C. Interview Techniques

A total of 327 interviews were conducted in the five areas of concentrated use during the course of the summer season. A few interviews were also conducted on other BLM lands within the study area, but these interviews were not computed along with the other data. One person from each vehicle was interviewed. Interviews were conducted with as many of the observed recreationists as possible whenever it could be done without interfering with an ongoing activity. Interviewees were encouraged to express any opinions they might have about the area, and interviews were generally not curtailed. The emphasis was on receiving in-depth responses. Many of the day use visits were of short duration and there were few opportunities to conduct the interviews without interfering with an ongoing activity. Consequently, a disproportionate number of campers (as opposed to day users) were interviewed. Two hundred and sixteen of the 327 recreationists interviewed were campers, and 111, or 34% were day users. The actual percent of day users was probably somewhat higher than 34 percent.

CHAPTER IV

THE DATA

A. Amount of Recreation Use

Table 1 presents the use estimates for the four BLM areas of concentrated use: South Madison, West Madison, Upper Bear Trap, and Lower Bear Trap. The use estimates are reported in recreational visits. A recreational visit is defined as one person engaging in a recreational activity for one day or any part of one day. The number of vehicles observed was recorded on the observation sheets. In order to arrive at the number of recreational visits, the number of vehicles observed was multiplied by the average number of people per vehicle, as computed from the interviews taken at each area.

Table 1 breaks down use within each of the four areas into several component parts. Figures 5-8 indicate the location of the component parts within each of the four areas.

Table 2 compares the average number of vehicles observed in the developed BLM recreation areas to the areas' capacity.

Table 3 reports the average number of boats launched at McAtee Bridge. The number of people in each boat was not recorded, but, for the most part, each boat contains three people; a river guide and two clients. The boaters occasionally stop and get out of the boat during the 11.5 mile float between McAtee Bridge and Varney. Allotment number 0444, for instance, is a popular lunch spot. Because of the difficulty of accurately measuring where this bank use from the boats occurs, this use was not computed along with the rest of the recreational use on BLM lands within the study area.

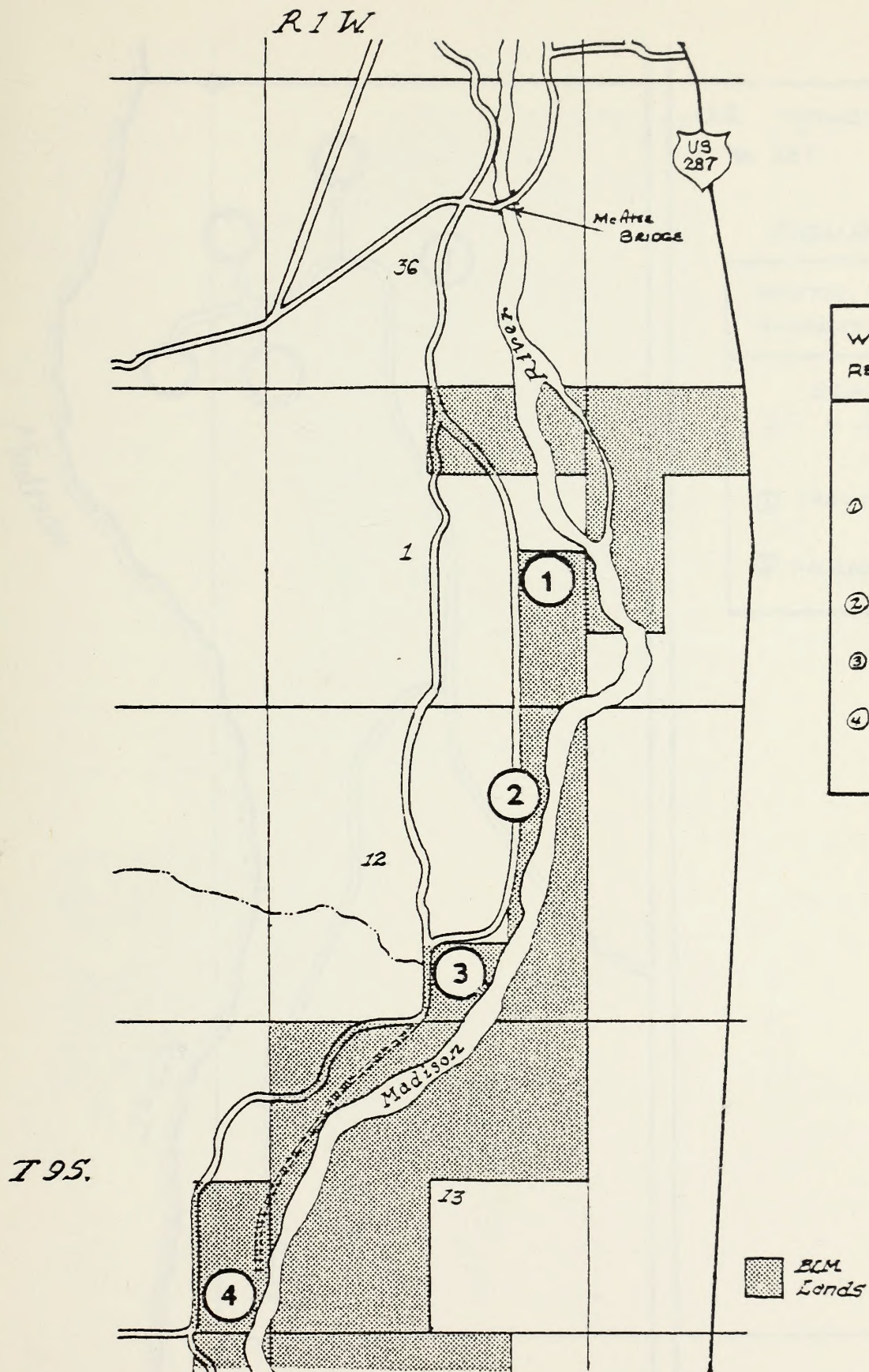
Table 4 reports the number of rafts and inner tubes that were observed on the 7.2 miles of river within the Lower Bear Trap area. Very light floating use also occurred within the main Bear Trap Canyon. A total of 4 rafts and 6 inner tubes were observed being launched at the power plant at the south end of the Bear Trap Canyon during the entire summer season.

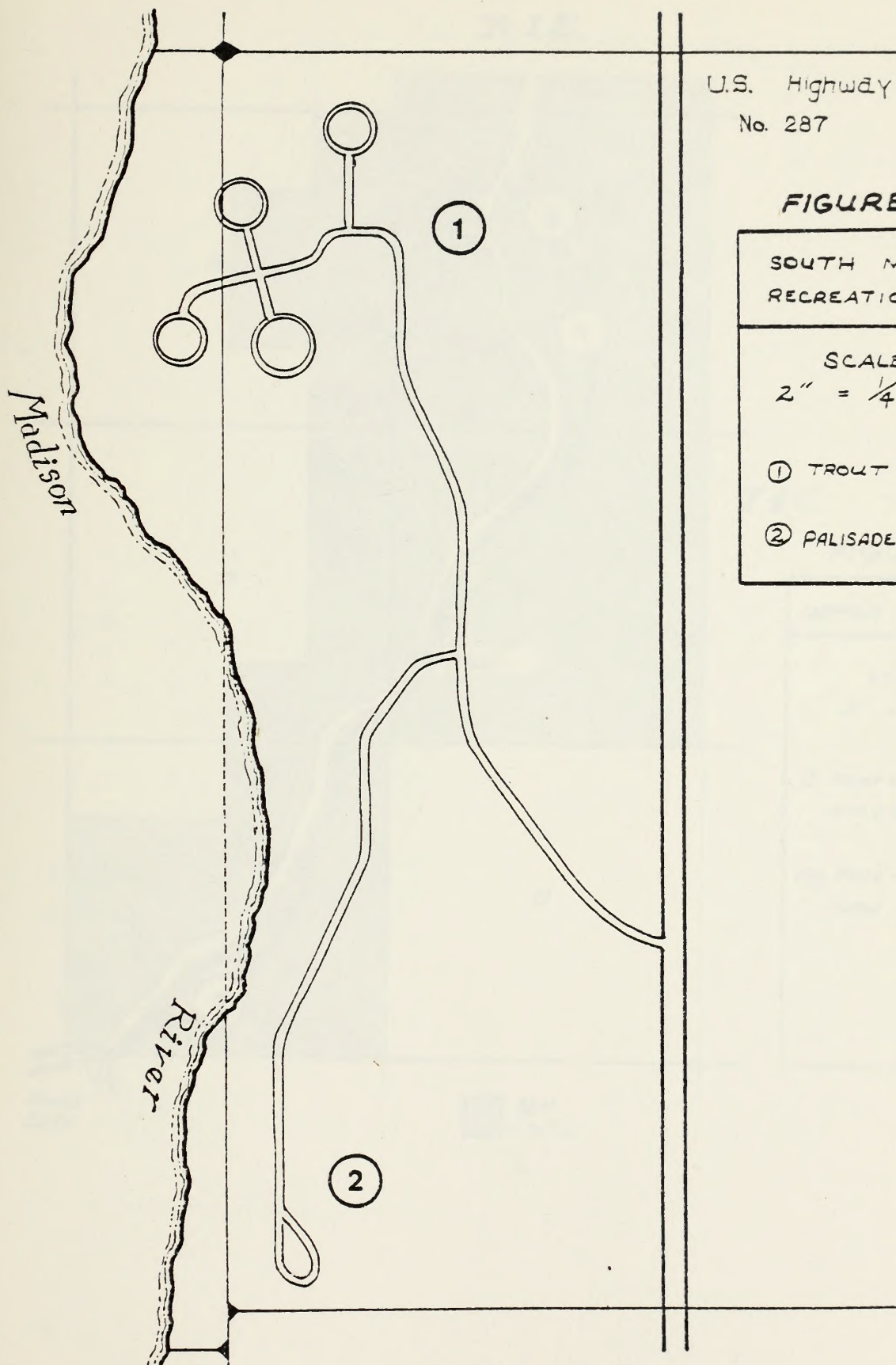
Table 5 depicts the minimum number of average daily recreational visits for each of the BLM grazing allotments within the Madison River Corridor. This was the observed use, based on random visits to the allotments. Actual use is no doubt higher. Use is not reported for the five allotments within the Lower Bear Trap area because corridor fences in this area separate the allotments from recreationists along the river. No recreation use was observed to occur above the corridor fences. Figures 9-11 indicate the location of the BLM grazing allotments within the study area.

Table 5 also depicts the minimum number of average daily recreational visits occurring at the BLM launch site on Ennis Lake.

TABLE 1. - Use Estimates for the Four BLM Areas of Concentrated Use.
Recreational Visits.

<u>Location</u>	<u>Average Weekday</u>	<u>Average Weekend Day</u>	<u>Estimated Total Use July 1 - September 5</u>
South Madison			
TOTAL	95.3	74.6	5930
1. Trout Campground	59.5	56.0	3910
2. Palisades Picnic Area	35.8	18.6	2020
West Madison			
TOTAL	74.4	94.8	5434
1. Ruby Campground	55.8	60.9	3851
2. Ruby Picnic Area	10.8	21.0	948
3. BLM Land North of Ruby PA	5.4	3.9	329
4. BLM Lands South of Ruby CG	2.4	9.0	306
Upper Bear Trap			
TOTAL	39.6	74.4	3419
1. Montana Power Co. Access Road	34.2	65.4	2978
2. Bear Trap Primitive Area Trailhead	5.4	9	441
Lower Bear Trap			
TOTAL	107.1	235.2	9994
1. Red Mtn. Campground	25.9	26.3	1744
2. Red Mtn. Picnic Area	5.0	16.2	581
3. Bear Trap Primitive Area Trailhead	8.6	14.4	704
4. Bear Trap PA Access Road	31.7	44.3	2402
5. Undeveloped Site at Hot Springs Cr.	15.8	69.5	2240
6. Hot Springs Cr. to Red Mtn. Bridge	9.4	31.7	1120
7. Red Mtn. Bridge North, East Side	2.9	4.7	234
8. Red Mtn. Bridge North, West Side	7.8	28.1	969
TOTAL ALL AREAS	<u>316.4</u>	<u>479</u>	<u>24777</u>





U.S. Highway
No. 287

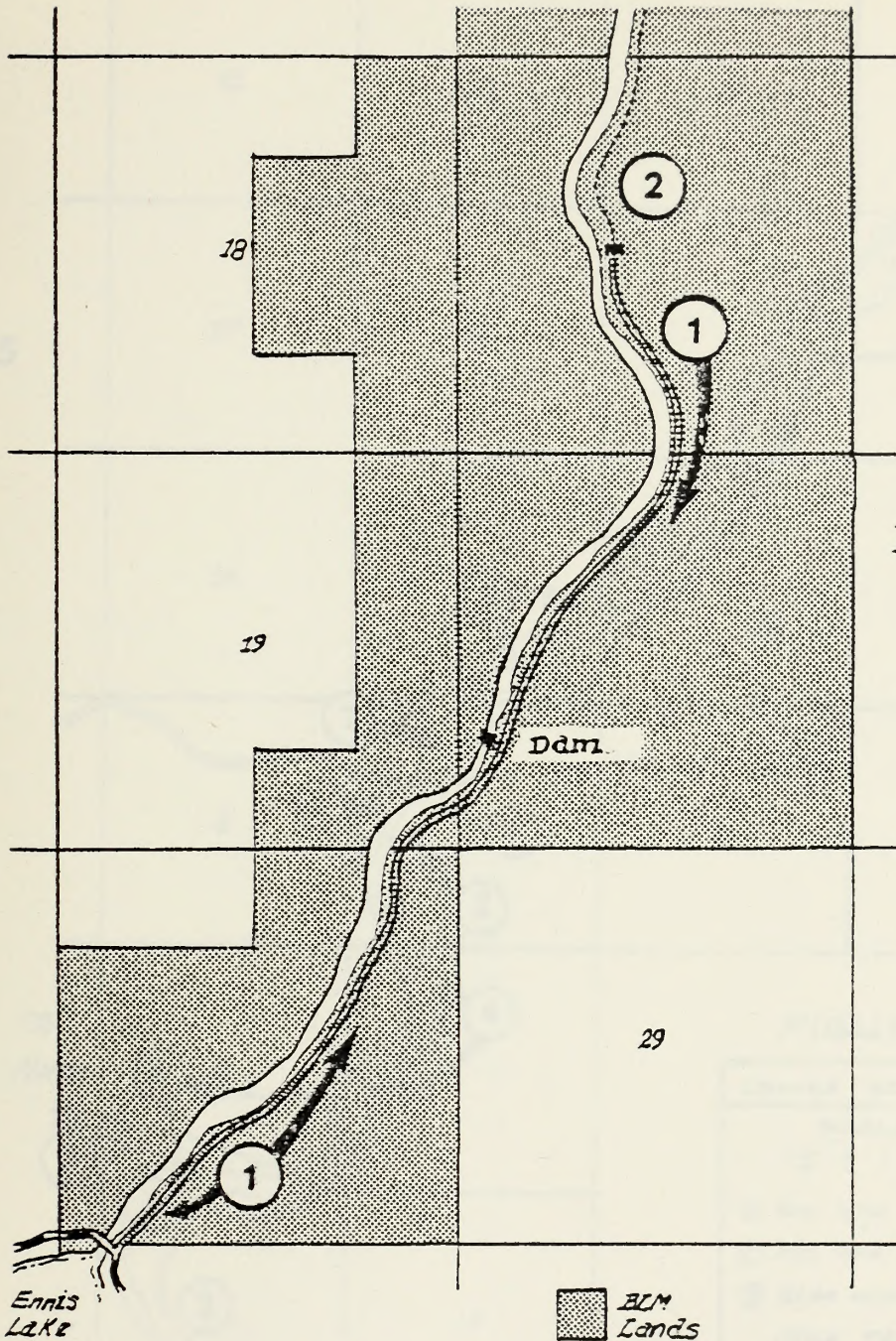
FIGURE # 6

SOUTH MADISON
RECREATION AREA

SCALE
2" = $\frac{1}{4}$ MILE

- ① TROUT CAMPGROUND
- ② PALISADES PICNIC AREA

R 1 E.



T45.

FIGURE 7

UPPER BEAR TRAP

SCALE

2" = 1 MILE

① MONTANA POWER CO
ACCESS ROAD

② BEAR TRAP PRIMITIVE
AREA TRAILHEAD

TABLE 2. - The Number of Observed Vehicles in the Developed BLM Recreation Areas

<u>Location</u>	<u>Weekdays</u>	<u>Date</u>	<u>Weekends</u>	<u>Date</u>
<u>Red Mountain</u>	10	7/8	4	7/2
Red Mountain camp-	7	7/26	8	7/17
ground 22 camping	2	8/1	9	8/13
units.	15	8/18	8	8/21
	2	8/31	7*	
	7*			
Red Mountain	4	7/8	4	7/2
picnic area	0	7/26	7	7/17
14 picnic tables	1	8/1	5	8/13
	2	8/18	2	8/21
	0	8/31	5*	
	1*			
<u>South Madison</u>	29	7/7	22	7/10
Trout campground	23	7/22	18	7/30
44 camping units	10	7/25	20	8/7
	16	8/17	10	8/27
	15	8/23	18*	
	19*			
Palisades picnic	14	7/7	6	7/10
area 22 picnic	11	7/22	8	7/30
tables	13	7/25	3	8/7
	7	8/17	6	8/27
	11	8/23	6*	
	11*			
<u>West Madison</u>	19	7/12	34	7/3
Ruby campground	19	7/20	18	7/16
28 camping units	18	7/28	19	8/20
	17	8/5	10	8/28
	20	8/15	20*	
	19*			
Ruby picnic area	3	7/12	16	7/3
9 picnic tables	6	7/20	2	7/16
	4	7/28	7	8/20
	2	8/5	3	8/28
	3	8/15	7*	
	4*			

* Average number of vehicles

TABLE 3. - The number of Boats Launched at McAtee Bridge

Weekday		Weekend	
<u>No. of Boats</u>	<u>Date</u>	<u>No. of Boats</u>	<u>Date</u>
26	7/1	34	7/9
20	7/14	10	7/24
11	8/3	20	8/6
3	8/22	23	9/4
4	8/30	22	Average
13	Average		

TABLE 4. - The Number of Rafts and Inner Tubes Observed on the Madison River in the Lower Bear Trap Area

Weekday			Weekend		
<u>Rafts</u>	<u>Innertubes</u>	<u>Date</u>	<u>Rafts</u>	<u>Innertubes</u>	<u>Date</u>
5	0	7/8	8	0	7/2
7	0	7/26	41	73	7/17
3	7	8/1	4	9	8/13
2	5	8/18	16	67	8/21
0	0	8/31	17	Avg.	37
3	Avg.	2	Avg.		

TABLE 5. - Minimum Average Daily Recreational Visits For Each Grazing Allotment Within The Madison River Corridor

<u>Allotment Number</u>	<u>Weekdays</u>	<u>Weekends</u>
0494	2.2	.80
0435	0 Closed to all fishing	0
0460	0 Closed to all fishing	0
0522	0	9.3
0452	0	3.1
0529	5.6	4.0
0524	4.0	4.0
0444	8.4	8.7
0457	0	1.9
0467	? Isolated, no access	?
0436		
0420		
0434	All in Lower Bear Trap Area - See Data Narrative	
0386		
0390		
BLM Ennis Lake Boat Launch	1.2	3.1

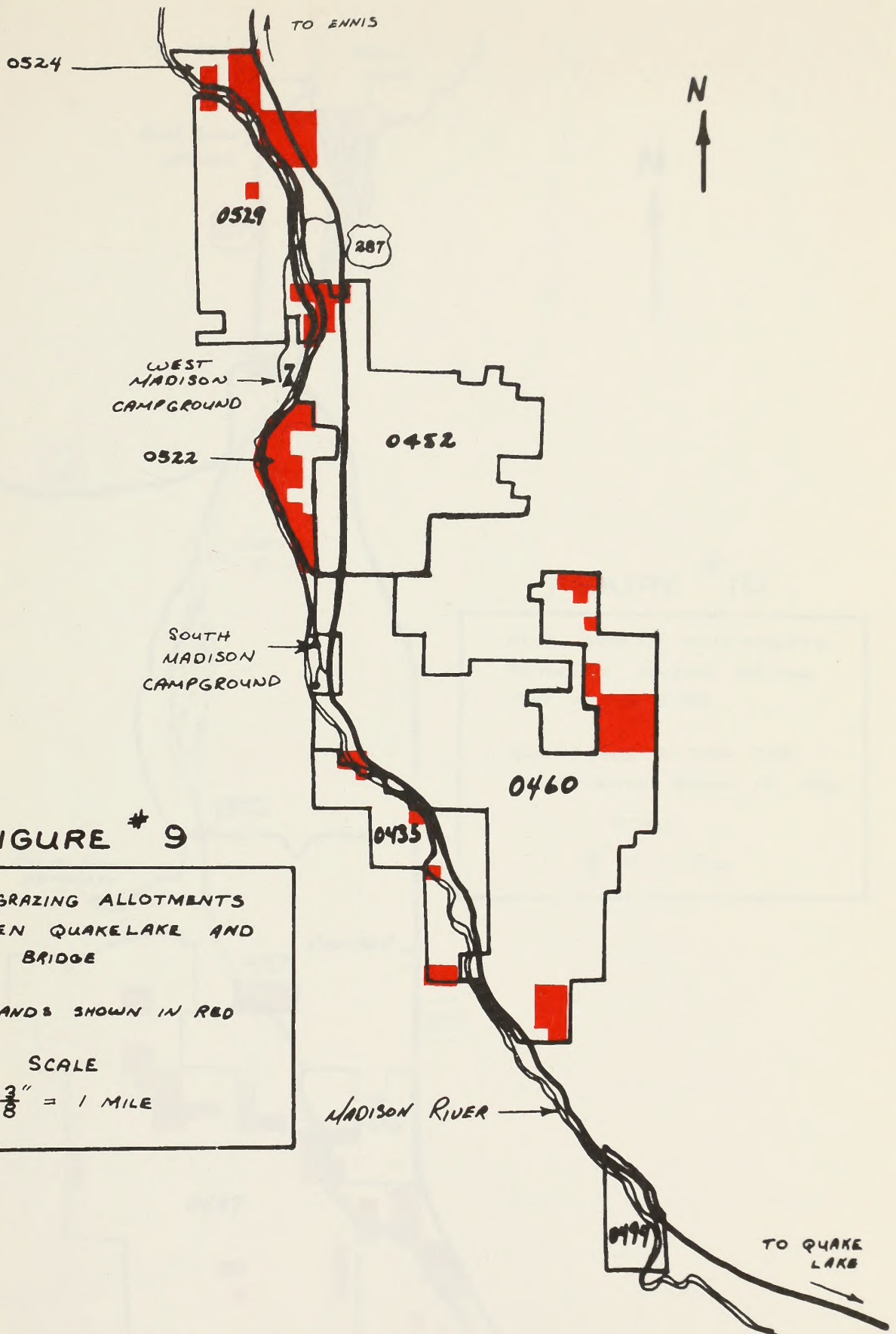


FIGURE # 9

BLM GRAZING ALLOTMENTS
BETWEEN QUAKELAKE AND
MCATEE BRIDGE

BLM LANDS SHOWN IN RED

SCALE

$\frac{3}{8}$ " = 1 MILE

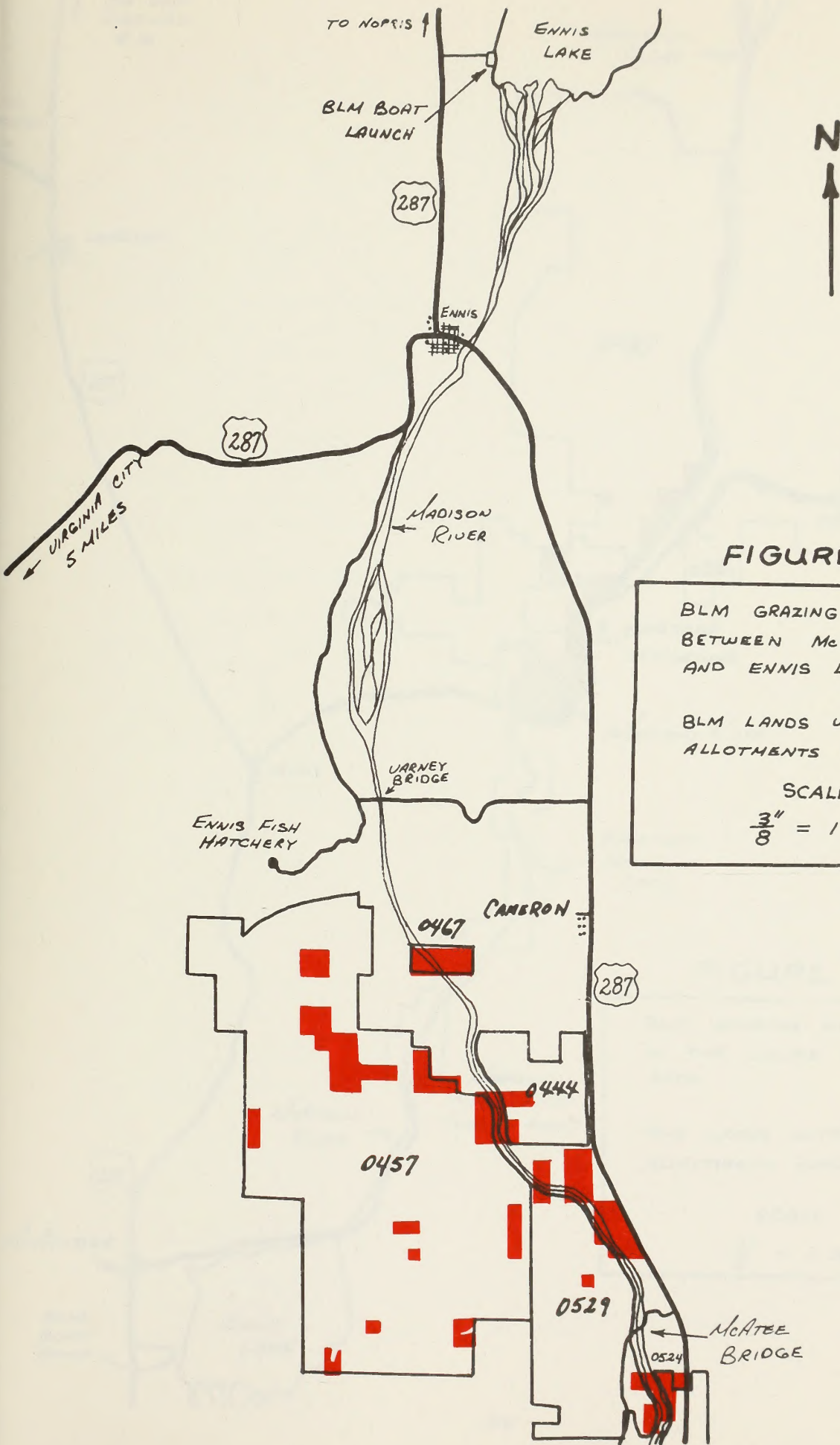
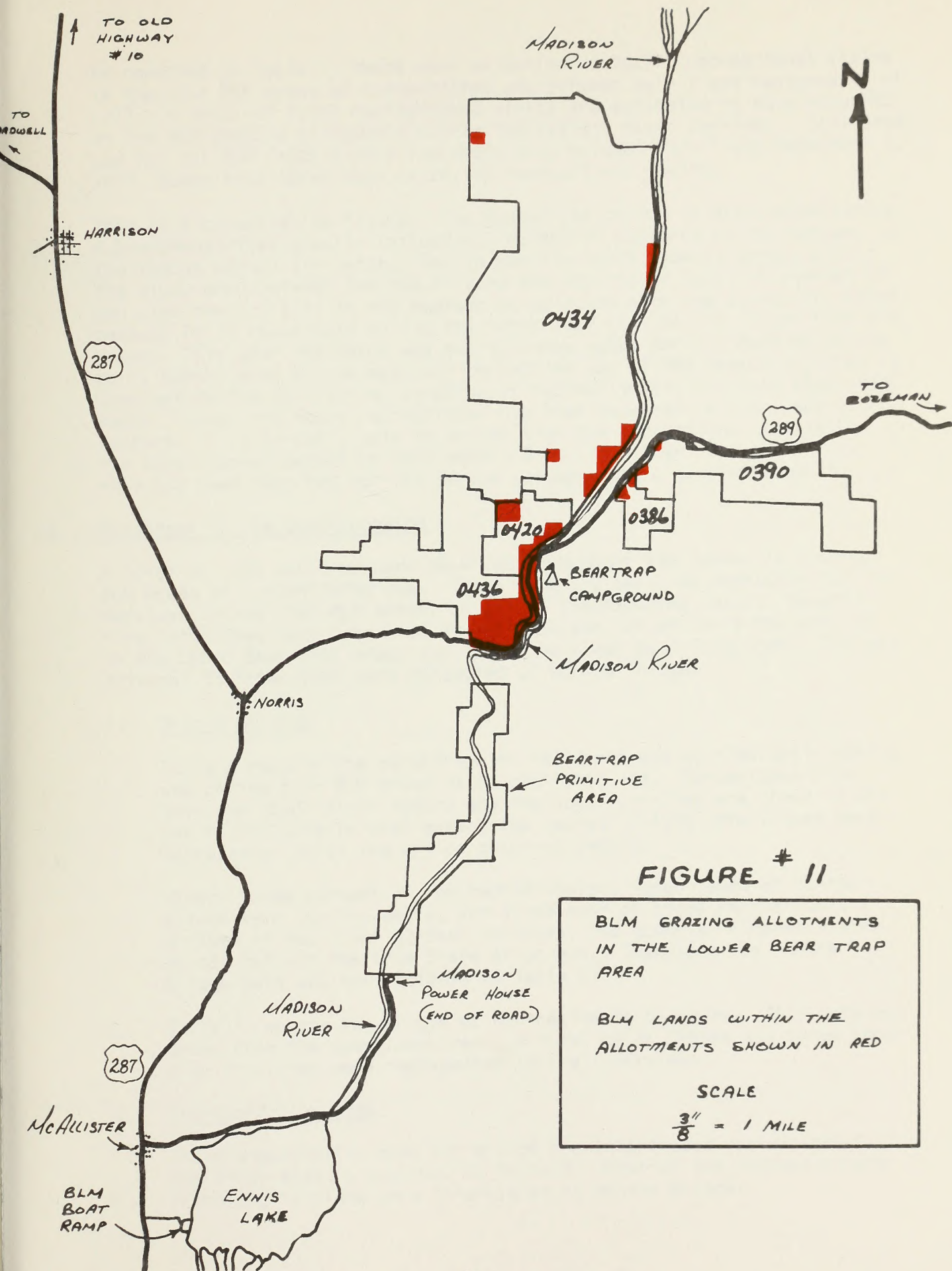


FIGURE #10

BLM GRAZING ALLOTMENTS
BETWEEN McATEE BRIDGE
AND ENNIS LAKE

BLM LANDS WITHIN THE
ALLOTMENTS SHOWN IN RED

SCALE
 $\frac{3''}{8} = 1 \text{ MILE}$



As reported in Table 1, there were an estimated 24,777 recreational visits in the four BLM areas of concentrated use between July 1 and September 5 of 1977. A total of 1,369 recreational visits are estimated to have occurred on the BLM grazing allotments within the Madison River Corridor. Estimated use for all BLM lands within the study area between July 1 and September 5, 1977, comes to a total then of 26,146 recreational visits.

This is a conservative figure. The summer use period is also conservative. A phenomenon that greatly influences recreation patterns on the Madison is the famous salmon fly hatch. The salmon fly hatch usually occurs within the study area between the end of June and the end of July. Fishermen often plan their visits to the Madison to coincide with the salmon fly hatch because it is reportedly during the hatch that many of the larger fish are taken. This year the hatch was two to three weeks early. Because of the early hatch, some of the heaviest recreation use of the season occurred in June before the statistical sampling of recreationists for this study had begun. Given the heavy recreational use that occurred in June, and other factors, it is probably safe to assume that the recreational visits for the total summer season of 1977 were 1/4 to 1/3 higher than the figure that has been reported for the period between July 1 and September 5.

B. Responses to the Questionnaire

A total of 1024 vehicles were observed throughout the summer in the four BLM areas of concentrated use. There were 272 vehicles contacted for interviews in the four BLM areas, or 27% of the observed total. Seventy five interviews were conducted at West Madison, 96 at South Madison, 26 in the Upper Bear Trap area, and 75 in the Lower Bear Trap area. The additional 55 interviews were conducted at McAtee Bridge.

1. Origin of Trip

Table 6 reports the percentage of residents and non-residents making use of the four BLM areas of concentrated use. Percentages from both the observation sheets and the questionnaires are shown in order to indicate to what extent the recreationists interviewed were representative of the entire observed sample.

Ninety three percent of the recreationists interviewed at McAtee Bridge were non-residents, but since most of those recreationists arrived in the river guides' vehicles, the observed license plates do not reflect the true State of origin. Therefore the McAtee Bridge data was not included in Table 6.

Table 7 reports the origin of non-residents by State. This data was drawn from the questionnaires. A total of 31 States and three Canadian Provinces were represented in the interviews.

2. Transportation Mode

The transportation mode for all of the interviewed recreationists in the study area is depicted in Table 8. Most of the recreationists traveling by plane were interviewed at McAtee Bridge.

TABLE 6. - Residence Of Recreationists On The Madison River

<u>Location</u>	<u>Observation of License Plates</u> <u>Sample Size = 983 Vehicles</u>		<u>Questionnaires</u> <u>Sample Size = 272 Interviews</u>	
	<u>% Resident</u>	<u>% Non-Resident</u>	<u>% Resident</u>	<u>% Non-Resident</u>
West Madison	24	76	11	89
South Madison	19	81	18	82
Upper Bear Trap	54	46	65	35
Lower Bear Trap	52	38	57	43
All Four Areas	42	58	46	54

TABLE 7. - Origin Of Non-residents By State - Entire Madison Study Area

<u>State</u>	<u>Percentage</u>
California	30
Utah	7
Colorado	7
Idaho	6
Washington	4
Illinois	4
Arizona	4
Indiana	3
Nevada	3
Texas	3
Wyoming	3
New Jersey	3
Alberta	2
Nebraska	2
Oregon	2
Other	17

3. Number of People per Vehicle

The average number of people per vehicle, as computed from the questionnaires for the entire study area, is 3.1.

4. Destination of Trip

Table 9 presents the destination of recreationists on the Madison River by percent.

5.6.7. Length of Entire Trip in Montana, in Area, at Interview Site

This data is all displayed in Table 10. Some of the recreationists who were interviewed on the Madison were retired people on extended vacations. These people tended to raise the average length of trip and length of stay in the area. The modal distribution is much lower than this data reflects.

8. Type of Lodging and Type of Campground

This data was not computed. As might be expected most of the people interviewed in the West Madison and South Madison areas were staying in Ruby and Trout campgrounds. Much of the day use at Palisades picnic area came from people who were staying in the Forest Service campgrounds, or at private resorts, in the West Fork area. The people who were floating with the river guides at McAtee Bridge were generally staying in motels at West Yellowstone and Ennis. Some of the recreation use in the Upper Bear Trap Area was from day users from Bozeman and Ennis. Non-resident users were generally staying in resorts on Ennis Lake or in motels in McAllister and Ennis. Recreationists camping in the Lower Bear Trap area seemed to prefer the undeveloped sites in the area to Red Mountain campground. Most of the day use in the Lower Bear Trap came from residents of Bozeman.

Type of Shelter

Table 11 depicts the type of shelter employed by recreationists at South Madison, West Madison, and the Lower Bear Trap area.

9. Primary Activity

The primary activities engaged in by recreationists within the study area are reported in Table 12.

10. Outfitter or Guide

The only place where recreationists, who were with an outfitter or guide, were encountered was at McAtee Bridge. Seventy two percent of the people interviewed at McAtee Bridge were with an outfitter. Table 13 compares the data on seven variables between those recreationists interviewed who were with an outfitter and those who were not with an outfitter.

TABLE 8. - Transportation Mode - Entire Madison Study Area

<u>Vehicle Type</u>	<u>Percentage</u>
Auto	23
Pick-up	6
Pick-up w/camper	13
Pick-up w/camper shell	6
Car or pick-up w/trailer	29
4-wheel drive vehicle	3
Motorcycle	0
Mobile home	6
Van	6
Bus	0
Airplane	6

TABLE 9. - Destination Of Recreationists In Percent

<u>Location</u>	<u>Madison Primary Destination</u>	<u>Madison One Of Multiple Destinations</u>	<u>Traveling Through</u>
West Madison	37	53	9
South Madison	12	36	53
Upper Bear Trap	46	46	8
Lower Bear Trap	55	36	8
McAtee Bridge	51	42	7
All Five Areas	37	42	21

TABLE 10 - Average Length Of Trip, And Length Of Stay In Area In Days

	<u>West Madison</u>	<u>South Madison</u>	<u>Upper Bear Trap</u>	<u>Lower Bear Trap</u>	<u>McAtee Bridge</u>	<u>All Five Areas</u>
Length of entire trip	28.9	32.8	18.7	22.6	11.5	25.6
In Montana	18.7	10.7	10.6	11.6	7.5	12.5
In area	11.5	3.4	9.3	5.2	4.4	8.0
At interview site	10.3	1.8	.23	4.5	.05	5.2

TABLE 11 - Type Of Shelter In Percent Employed By Recreationists In The
Three Developed BLM Recreation Areas

<u>Shelter Type</u>	<u>West Madison</u>	<u>South Madison</u>	<u>Lower Bear Trap</u>
Tent	18	26	28
Trailer	52	36	45
Camper	16	18	12
Camper shell	1	4	2
Van	3	4	7
Mobile home	7	8	4
None	3	3	2

TABLE 12 - Primary Activity Engaged In By Recreationists Within The Study Area - Percent Engaged In Each Activity

<u>Activity</u>	<u>West Madison</u>	<u>South Madison</u>	<u>Upper Bear Trap</u>	<u>Lower Bear Trap</u>	<u>McAtee Bridge</u>	<u>All Fiv Areas</u>
Fishing	85	50	72	65	100	70
Floating (not fishing)	1	0	12	18		5
Traveling through	5	35	0	4		14
Relaxation	5	8	8	7		6
Other	4	7	8	6		5

TABLE 13 - All Madison Recreationists Interviewed Who Were With An Outfitter Compared On Seven Variables To Recreationists Not With An Outfitter

	<u>With Outfitter</u>	<u>No Outfitter</u>
Length of trip in days	11.5	27.7
Number of days in Montana	7.6	13.3
Number of days on the Madison	4.4	8.5
Total trip expenditure	\$1,135.50	\$652.00
Expenditure in Montana	\$694.50	\$259.80
Number of previous visits	4.4	19.3
Years ago first visit	8.4	8.4

11. Kind of Expenditures

This data was not computed. As might be expected campers who were just traveling through generally stated that they were spending money only on food, drink, and gas, with gas often mentioned as the major expense of the trip. Campers who were staying in the area generally stated that they were spending money on food, drink, gas, fishing licenses, and sporting goods. Recreationists who were with an outfitter or guide were generally spending money on food, drink, lodging, gas, fishing licenses, sporting goods, and guide fees.

12.13. Total Estimated Expenditure for Trip Per Vehicle, and Estimated Expenditure per Vehicle in Montana

Table 14 reports the average daily expenditure per person for each of the four BLM areas of concentrated use. The data was collected in the form of total expenditures per vehicle. In order to arrive at the average daily expenditure per person, the average trip expenditure was first divided by the average length of trip and then divided again by the average number of people per vehicle. The low average daily expenditure per person in Montana reported for the Upper Bear Trap and Lower Bear Trap areas reflects the high percent of resident use in these areas.

Table 15 compares the average daily expenditure of those recreationists who were with an outfitter to the average daily expenditure of those recreationists who were not with an outfitter.

14. Number of Prior Visits and Years Ago for First Visit

The average number of prior visits computed from all the interviews conducted on the Madison is 18. The typical recreationist interviewed first visited the Madison 8 years ago.

15. Access

Seventy percent of the recreationists interviewed on the Madison felt that there is adequate access to the river. Sixteen percent felt that access to the river was inadequate, and 14 percent had no opinion.

16. Recreation Facilities

Eighty two percent of the recreationists interviewed on the Madison viewed the recreation facilities in the area as adequate. Twelve percent felt that the facilities were inadequate, and six percent had no opinion.

17. Likes

This question is difficult to quantify. Generally 56 percent of the recreationist interviewed stated that they most liked the scenery

TABLE 14 - The Average Daily Expenditure Per Person

<u>Daily Expenditure</u>	<u>West Madison</u>	<u>South Madison</u>	<u>Upper Bear Trap</u>	<u>Lower Bear Trap</u>	<u>All Four Areas</u>
Entire Trip	8.01	9.00	8.81	5.04	7.36
Montana	6.30	7.13	4.49	4.70	6.10

TABLE 15 - The Average Daily Expenditure Per Person. Recreationists With Outfitter Compared To Recreationists With No Outfitter.

<u>Daily Expenditure Per Person</u>	<u>With Outfitter</u>	<u>No Outfitter</u>
Entire Trip	\$37.00	\$7.36
Montana	\$35.14	\$6.10

and the primitive undeveloped nature of the area. Forty one percent gave fishing as their strongest like. Scenery, and scenery and fishing, were the most common responses.

18. Dislikes

The dislikes are displayed in Table 16, yet a simple chart cannot really do justice to this question. Many people discoursed at great length in response to this question. Many of the more urgent concerns focused on the quality of fishing in the Madison, but a wide variety of concerns were expressed. Some of the dislikes that were grouped under "other" in Table 16 included insects, dust, skunks, no firewood, litter, commercialization, moss in the river, noisy campers, and metallic debris in the river in the Upper Bear Trap. The most interesting dislike was expressed by an old miner from Butte fishing in the Lower Bear Trap area. He disliked going home...

19. Would You Return

Ninety eight percent of the recreationists interviewed on the Madison stated that they would return to the area. The very few who stated that they would not return usually gave the dry, open nature of the area, or deterioration in the fishing, as the reasons they would not return.

20. Awareness of BLM Lands

Table 17 reports the percent of recreationists in each of the five areas who were aware that they were on lands administered by the BLM. The launch site at McAtee Bridge is not on land administered by the BLM. Recreationists at McAtee were asked if they were aware that they would be floating past BLM lands adjacent to the river.

21. Attempted to Locate Undeveloped BLM Lands

Only eleven percent of the recreationists interviewed on the Madison had ever attempted to locate any of the undeveloped BLM lands in the area. Fifty nine percent of those recreationists who had attempted to locate the undeveloped BLM lands in the area experienced difficulty in locating them.

22. Aware of BLM Recreation Maps

Only twenty two percent of the recreationists interviewed were aware that BLM provides recreation maps indicating the location of National Resource Land.

23. Part of a Larger Group

Thirty percent of the recreationists interviewed on the Madison were part of a larger group. The average group size was 8.8. Some of the larger groups were family reunions that drew as many as 50 people.

TABLE 16 - Dislikes Displayed in Percent

<u>Dislikes</u>	<u>West Madison</u>	<u>South Madison</u>	<u>Upper Bear Trap</u>	<u>Lower Bear Trap</u>	<u>McAtee Bridge</u>	<u>All Five Areas</u>
Nothing	34	60	29	50	58	49
Wind	15	12	0	1	0	7
Boats	23	3	8	3	9	9
No Trees	8	7	0	6	2	5
Crowded	3	1	8	3	4	3
Rattlesnakes	0	0	17	13	0	4
No Tent Pads	0	4	0	0	0	1
Poor Fishing	8	2	0	3	4	4
Bait Fisher- men	0	0	0	0	7	1
Other	8	11	38	21	16	17

TABLE 17 - Percent of Recreationists Aware That They Were on BLM Lands.

	<u>West Madison</u>	<u>South Madison</u>	<u>Upper Bear Trap</u>	<u>Lower Bear Trap</u>	<u>McAtee Bridge</u>	<u>All Five Areas</u>
Aware of BLM Lands	73	42	4	44	13	42
Unaware of BLM Lands	27	58	96	56	87	58

24. Additional Comments

Many additional comments were recorded. These comments were all taken into account in drawing the conclusions of this report and in making the management recommendations.

CHAPTER V

CONCLUSIONS

A. The Five Areas of Concentrated Use

1. West Madison

The West Madison area is the most popular of the three developed BLM recreation areas on the Madison River. The popularity of this area centers on Ruby Campground. Unlike the other developed BLM Campgrounds on the Madison, Ruby receives little transient use. The average length of stay at site of those recreationists who were interviewed in the West Madison area was 10.3 days. A few recreationists camped in Ruby Campground for the entire summer. In some respects, Ruby Campground is more like a community than a campground. Many of the people using the areas have been coming there every year for the last several years. They all know each other. Friends and relatives come to visit the long term campers.

One of the reasons that Ruby Campground receives such long term use is that there is no charge for camping. Many of the recreationists using the area are retired people who seek out BLM campgrounds because they are generally free of charge and because no camping limits are enforced. Another reason that Ruby Campground receives long term use is that it receives very little short term use. There is a large sign at the main highway that states, "West Madison Recreation Area", but Ruby Campground is roughly four miles from the highway and there are few directional signs. Some of the people interviewed in the South Madison Area mentioned that they had attempted to find the West Madison Area without success. A few recreationists confused the undeveloped Fish and Game boat launch at McAtee Bridge with the West Madison Recreation Area. Because of these factors, the long term campers at Ruby Campground are not bothered by an influx of vehicles every evening.

A third factor that accounts for Ruby Campground's popularity is Ruby Creek. Ruby Creek bisects the two camping loops in Ruby Campground. The line of small trees along the creek provides both a windbreak and shade for the camping units nearby. The trees also break up the campground and provide a measure of privacy. For those recreationists with families, the creek provides a safe place for children to play.

By combining the information that is provided in Tables 6, 9, 10, 11, and 12, the basic pattern that emerges for Ruby Campground is that of long term campers, most of whom are non-resident fishermen, who are utilizing trailers as their shelter.

As Table 2 indicates, Ruby Picnic Area was the most utilized of the three BLM picnic areas on the Madison River in relation to its capacity. Roughly half of the use observed in Ruby Picnic Area was overflow camping from Ruby Campground. Table 2 also shows that Ruby Campground was observed to exceed its capacity at only one time during the summer season of 1977, but it was consistently filled to approximately 3/4 of its capacity. Some campers chose to stay in Ruby Picnic Area because it was less crowded than the campground. The picnic area is roughly half a mile from the campground and some of the recreationists who camped in the picnic area were not aware that the campground was just down the road. Unlike the campground, the picnic area is devoid of trees and therefore has no shade, windbreak, or privacy. Recreationists camping in the picnic area generally only stayed one night. The rest of the use observed at Ruby Picnic Area was day use as a fishing access site. No recreationists were ever observed using the area for picnicking during the 1977 summer season.

The BLM lands south of Ruby Campground are not part of a grazing allotment because they are adjacent to the Wall Creek State Game Range. Signs identify the BLM lands as a public fishing area. A primitive road runs along the river in this area for approximately one mile. The road is extremely rough and rutted and resource damage is occurring where vehicles are driving around the roughest spots. Most of the recreation use that was observed in this area was day use by fishermen. Occasionally recreationists were observed camping in this area. These recreationists stated that they preferred this area to the campground because it is isolated and away from other people.

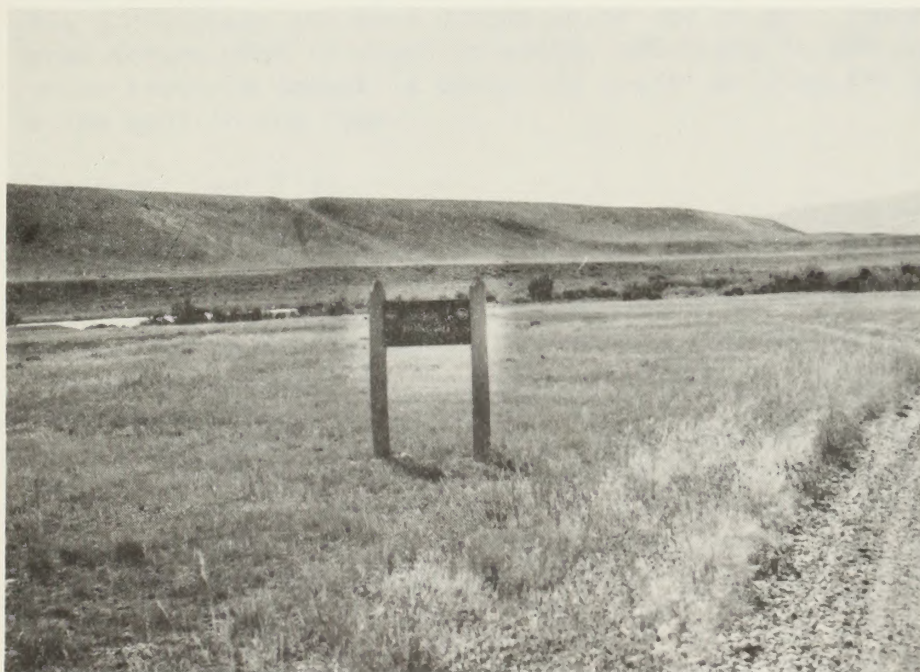
The BLM lands north of Ruby Picnic Area are part of grazing allotment #0529. The ownership is mixed private and public. Signs on the West Madison Recreation Area access road indicate where the private land is and ask recreationists to stay on the road. The current allotment holder does not mind recreationists on foot crossing the private land in the allotment, but they discourage recreationists in vehicles from driving on both the private and public land in the allotment. The recreation use that occurs on this allotment is fishermen who park along the West Madison access road and walk across the allotment to the river. Roughly half of this recreation use comes from recreationists who are camped in Ruby Campground.

2. South Madison

As Table 1 indicates, the South Madison area received the most recreational visits of the three developed BLM recreation areas on the Madison River. For the most part, this was transient use by non-residents. The modal length of stay at Trout Campground is one night. Typically, recreationists on the way to or from Yellowstone National Park would see the camping signs on the highway and pull into the campground between 5 p.m. and 11 p.m. in the evening. They would then leave the area between 8 a.m. and 10 a.m. the next morning. Occasionally, fishermen would stay in Trout Campground for 2 or 3 days but there were generally no lengthy stays.



Ruby Campground



BLM lands south of Ruby Campground

Table 11 shows that 36 percent of the recreationists interviewed in Trout Campground were staying in trailers. Another 18 percent were staying in campers, and 26 percent were using tents. The recreationists at Trout Campground who were staying in tents often complained about the lack of rock free places to pitch tents. Tenters also occasionally complained about the noise of generators in the recreational vehicles.

There are four loops in Trout Campground. Each loop contains 11 camping units. Brooks, the loop furthest from the river, has never been opened. The working capacity of Trout Campground then is 33 camping units. Table 2 shows that this capacity was never observed to be reached and that the average number of camping units being employed was 19.

Campers in Trout Campground often complained about the dry, open nature of the area. Because of the lack of trees, there is no windbreak, no shade, and no privacy.

Palisades Picnic Area received very light use during the summer season on 1977. Most of the use it did receive was from people using it as a fishing access site. Travelers on the main highway would occasionally stop to use the toilets. Perhaps one or two groups of people a day were observed to picnic in the area. Some of the picnic tables and fire grates in the area are completely overgrown with weeds.

Fifty-eight percent of the recreationists interviewed at South Madison were unaware that the area was administered by the BLM, even though there is a large sign on the main highway indicating that South Madison is a BLM Recreation Area. Some recreationists commented that they thought better signing was needed to indicate the presence of the area. Many people commented that they were confused at the point that the recreation area entrance road crossed the old highway and were unsure which way to go. The recreation area access road is rough in spots, and there is one point at which resource damage is occurring where vehicles are avoiding a low spot in the road.

3. The Upper Bear Trap

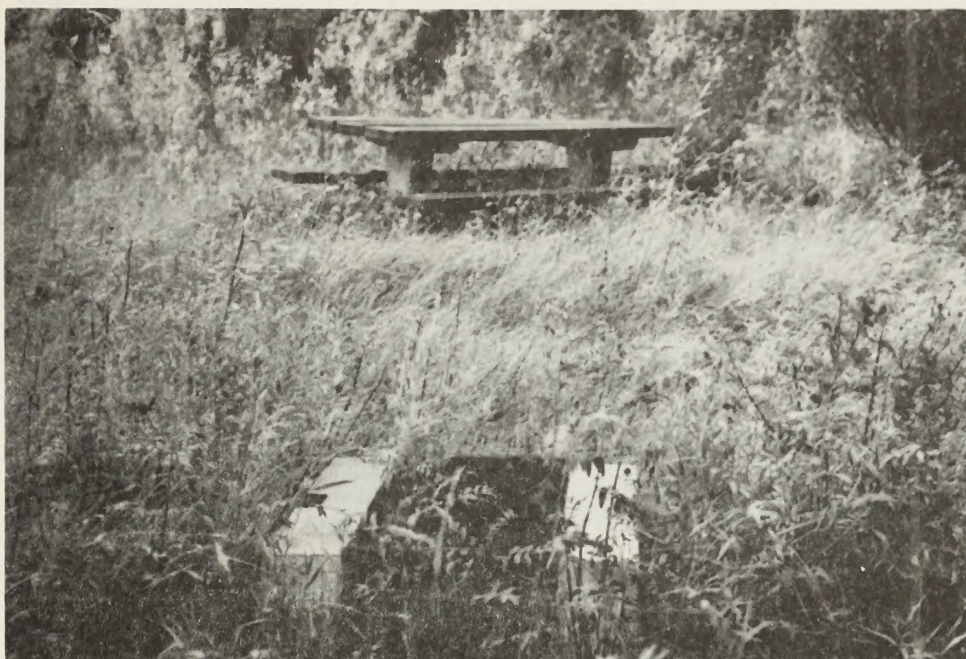
The Upper Bear Trap could best be described as a recreation planner's nightmare. The four mile access road is rough and extremely narrow with few places where two cars can pass without one of them having to back up to a wide spot. The parking area at the Montana Power Company power plant at the end of the road is cramped and small, and most of the available spaces are taken up by vehicles belonging to Montana Power employees. The power plant is the trailhead for the BLM Bear Trap Canyon Primitive Area. Hikers entering the primitive area must first skirt an area alongside the power plant that is marked with a sign that states, "danger high voltage". The trail then crosses through an overflow chute that is marked with a sign that warns that, "water level might rise suddenly without notice". If there is a malfunction in the power plant, 1,600 cubic feet of water per second is automatically shunted through the chute.



"Campers in Trout Campground often complained about the dry, open nature of the area."



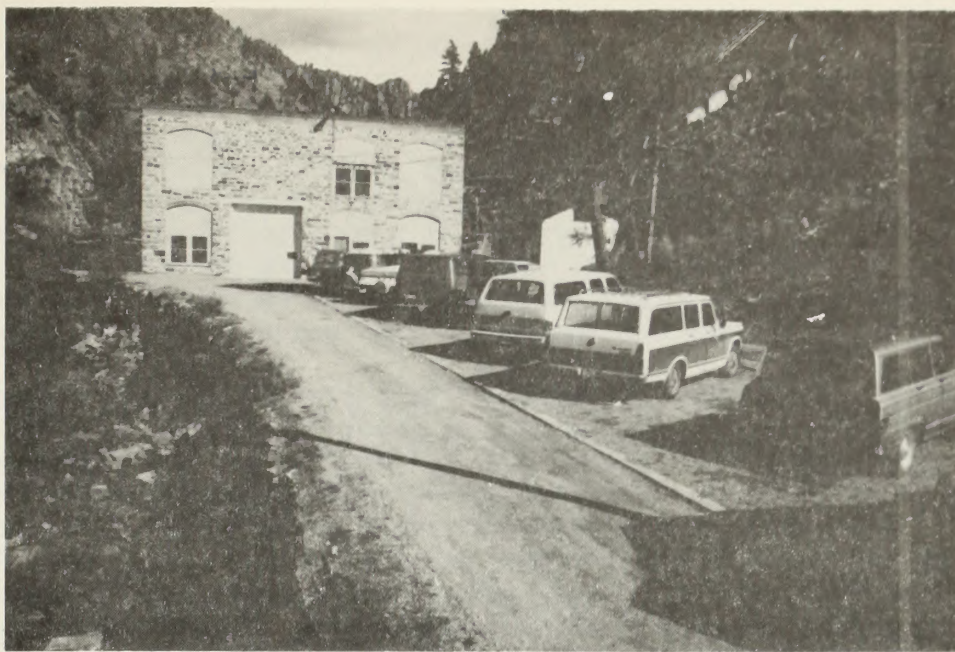
"The overgrown, unkept appearance of Brook Unit adds to the general 'desolate' appearance of Trout Campground."



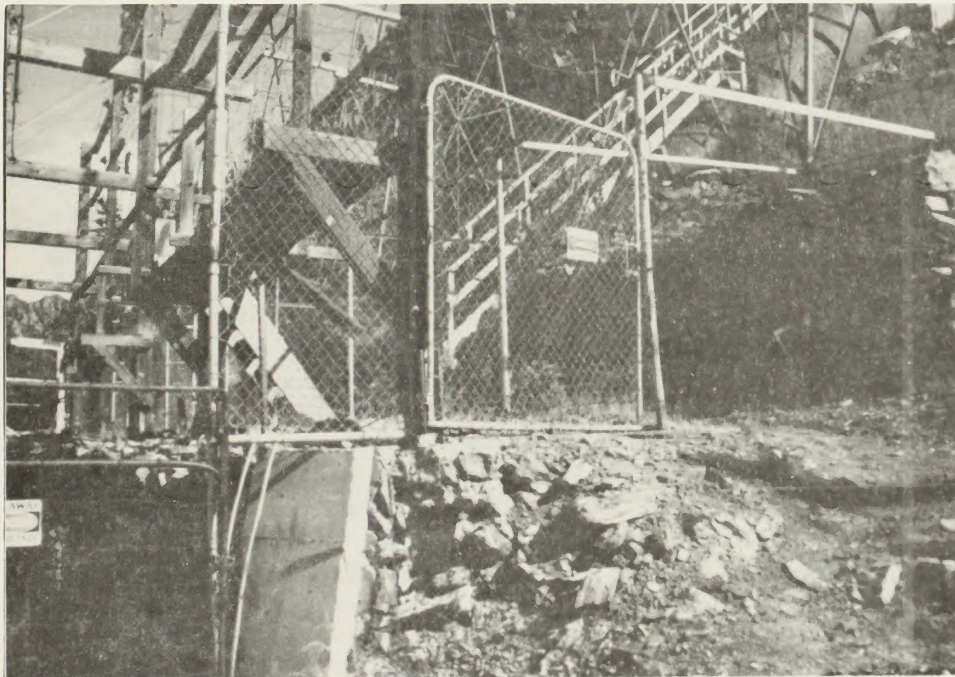
"Some of the picnic tables and fire grates in Palisades Picnic Area are completely overgrown with weeds."



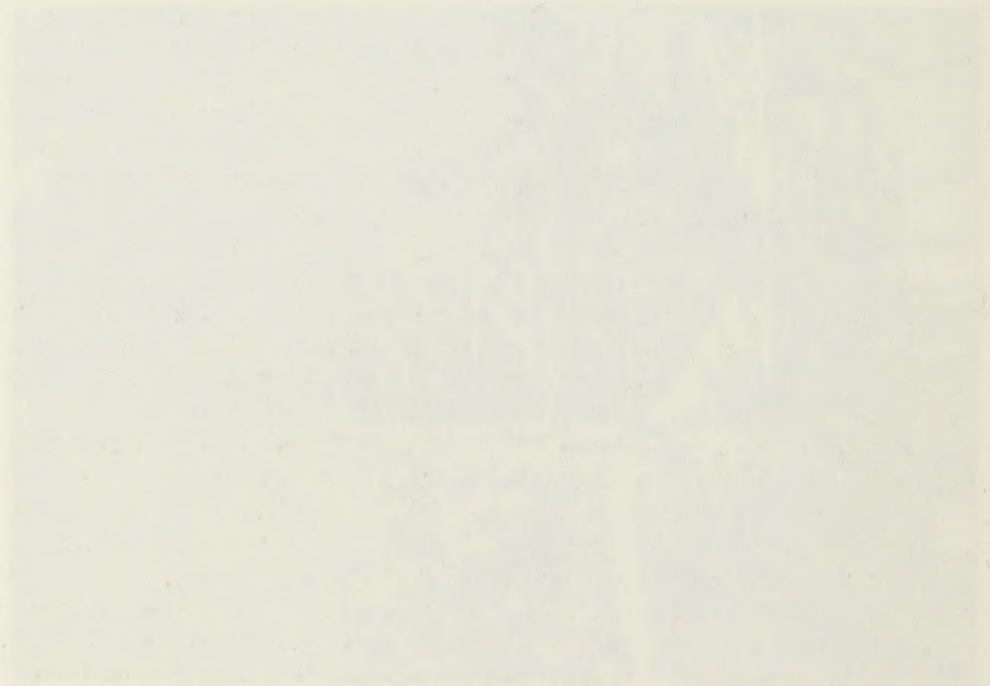
"Fifty-eight percent of the recreationists interviewed at South Madison were unaware that the area was administered by BLM even though there is a large sign indicating that the area is a BLM Recreation Area."



"The parking area at the Montana Power Company power plant is cramped and small



The trailhead for the Bear Trap Canyon Primitive Area.



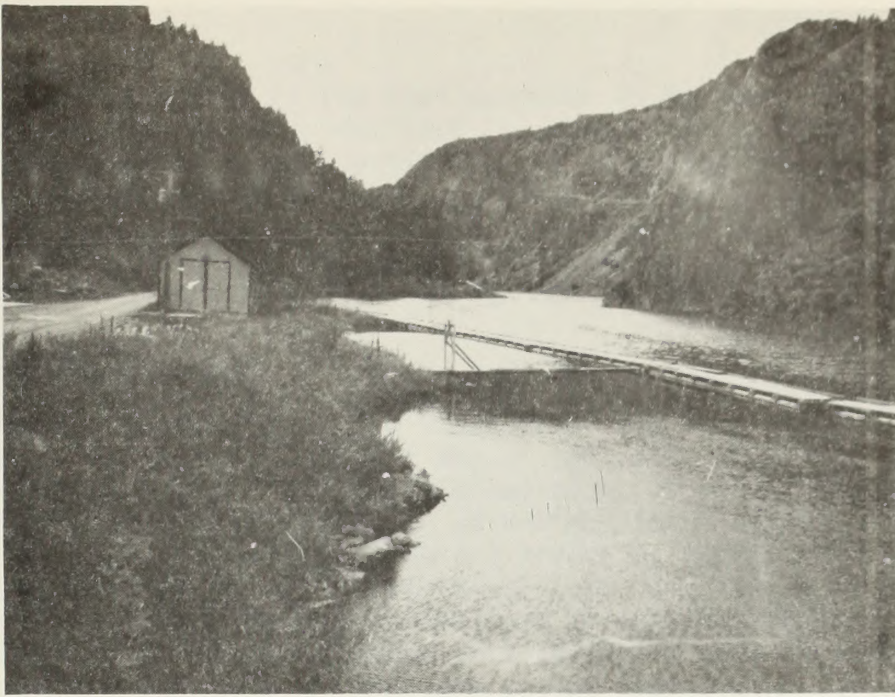
Despite the narrow, rough road, the lack of any facilities and the hazardous approach to the Primitive Area, the Upper Bear Trap receives a relatively high amount of recreation use. An average of 16 vehicles per day was observed using the access road for recreational purposes, and an additional average of 2 vehicles per day was observed parked at the Bear Trap Primitive Area trailhead. Forty-two percent of the total use occurred on weekend days but use was spread out throughout the week.

Most of the use in this area is extremely short term with some recreationists just driving in and out sightseeing from their vehicles, and the bulk of the rest coming to fish along the road for an hour or two. Most of the recreationists that were observed entering the Bear Trap Primitive Area were day users hiking in to do some fishing. There was some infrequent overnight use by backpackers in the Primitive Area, and a total of five parties throughout the summer were observed launching boats in order to float the Bear Trap Canyon.

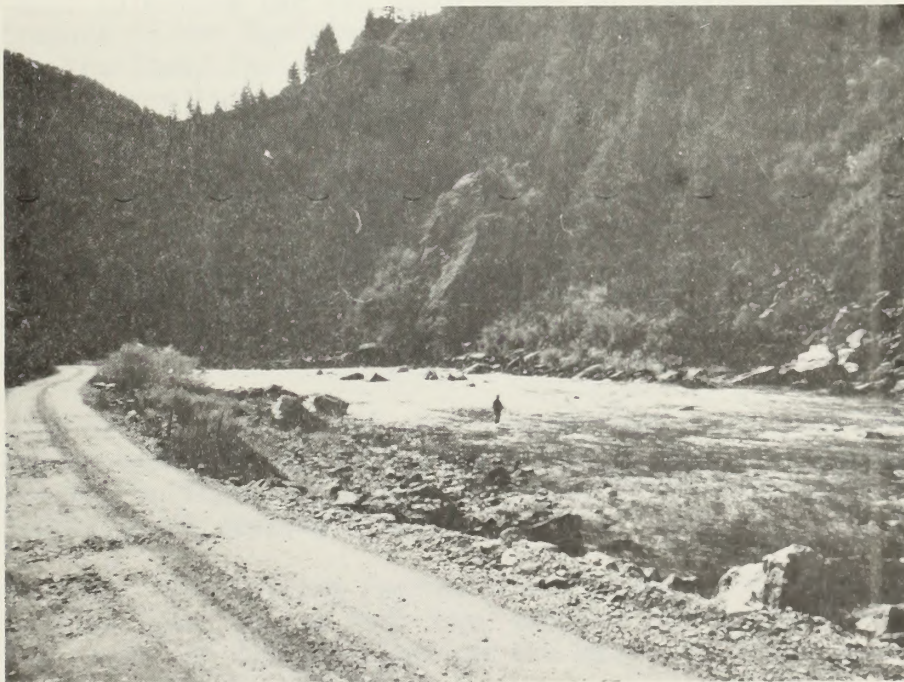
The portion of Ennis Lake within the Bear Trap Canyon was frequently used by power boaters for sightseeing, fishing, and water skiing. For the most part the power boaters come in under the bridge at the mouth of the canyon, but a few of the power boats are launched within the canyon at a small undeveloped camping spot about $\frac{1}{2}$ mile from the mouth of the canyon. This is the only camping spot in the Upper Bear Trap Area and it is frequently occupied on weekends. The short access road to the camping spot is extremely rough. Directly across the power plant access road from the camping spot is the trailhead for a trail that leads up Barn Creek to Forest Service lands on the east side of the canyon. This trail received light use during the summer season but apparently receives relatively heavy use both from outfitters and private hunters during the hunting season.

The responsibility for managing the recreation use that occurs in the Upper Bear Trap area is not clear. The Upper Bear Trap is BLM land that has been leased to the Montana Power Company. The road was built, and is maintained by Montana Power. Montana Power has undertaken some efforts to regulate the recreation use in the area. A sign at the beginning of the access road welcomes visitors to the Madison Hydroelectric Project and states that the area is "open to the public without discrimination". A sign that is located just beyond the small camping spot states, "No trailers, fires, or overnight camping beyond this point. Thanks, Montana Power." Another sign, approximately $\frac{1}{4}$ miles before the end of the road, asks recreational visitors not to park in the power plant parking area. In addition to the signs, Montana Power maintains some garbage cans along the access road.

BLM has taken no steps thus far to manage recreation use in the Upper Bear Trap Area. BLM distributes a brochure that describes



"Ennis Lake looking south from the Madison Dam. The portion of Ennis Lake within the Bear Trap Canyon was frequently used by power boats for sightseeing, fishing, and water skiing."



The Upper Bear Trap access road between the dam and the powerhouse.

the Upper Bear Trap is the best approach to the Bear Trap Canyon Primitive Area but the trailhead is unmarked and difficult to find, and there are no signs identifying the Primitive Area in any way. There are also no signs that identify the lands in the Upper Bear Trap as public lands. Table 17 indicated that 96 percent of the recreationists who were interviewed in the Upper Bear Trap Area were unaware that they were on BLM lands.

4. The Lower Bear Trap

As Table 1 clearly shows the Lower Bear Trap Area received many more recreational visits than any of the other BLM lands along the Madison River. Most of this use occurred at the undeveloped sites in the area, rather than at Red Mountain Campground and Red Mountain Picnic Area. Table 2 indicates that both the campground and the picnic area received light use. The most intensive overnight use occurred at undeveloped sites along the Bear Trap Primitive Area access road and at a series of undeveloped sites along the first mile of dirt road on the west side of the river just north of the Red Mountain Bridge. Campers stated that they preferred the undeveloped sites because, unlike the campground, they were right on the river, had trees to provide shade, and offered more privacy. Some of the sites along the Primitive Area access road received long-term camping use of up to 90 days.

The most intensive day use occurred at an undeveloped site at the confluence of Hot Springs Creek and the Madison River. This site is the trailhead for a trail entering the Bear Trap Primitive Area that fishermen have developed on the west side of the river. The most frequent use for this site though is a launch site for the 6 mile float down the river to the point at which route 289 leaves the river enroute to Bozeman. Forty-four vehicles were observed at the undeveloped site at Hot Springs Creek on Sunday, July 17, 1977. The bulk of those vehicles contained recreationists who were launching rafts and inner tubes. The intensive use in this area is evident even when no recreationists are present because of the extremely rough, rutted multiple roads at the site.

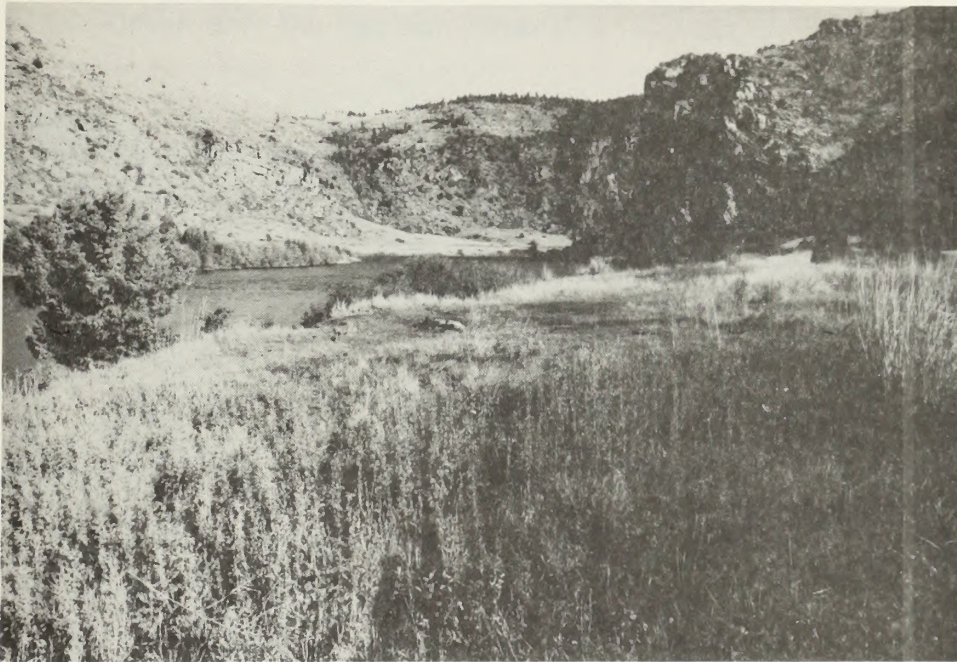
An undeveloped site on the west side of the river immediately north of Red Mountain Bridge also gets intensive use as a launch site, especially on the cooler days, and late in the afternoon when recreationists are seeking a shorter float.

Most of the floaters are residents of Bozeman. Those floaters who were interviewed stated that they enjoyed this particular stretch of the river for floating because the water was warm, shallow, and safe.

There is some camping use at the undeveloped site along the main road between Hot Springs Creek and Red Mountain Bridge but for the most part these sites as well as the undeveloped sites along the main road north of Red Mountain Bridge are used by day fishermen. Litter is somewhat a problem at all of the undeveloped sites in the Lower Bear Trap Area.



Red Mountain Picnic Area



An undeveloped camping spot along the Bear Trap Primitive Area access road.



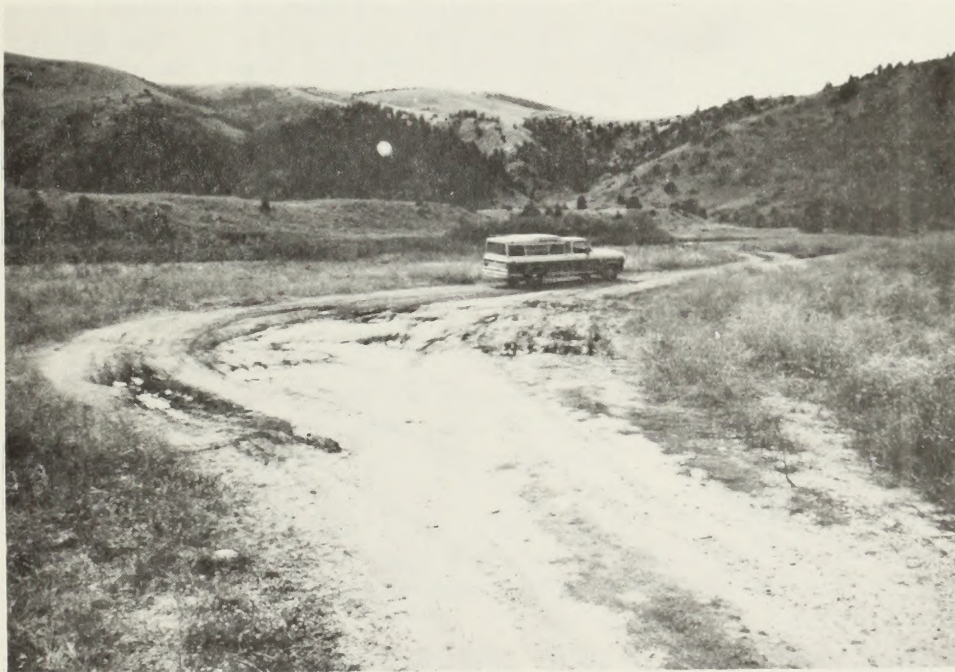
THE SPANISH FAMILIA



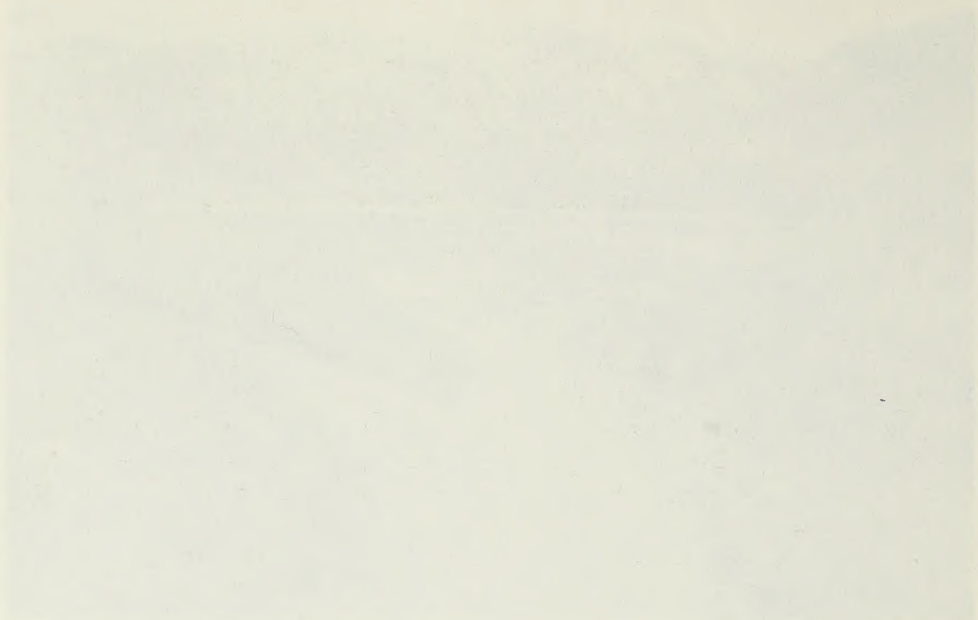
THE SPANISH FAMILIA



"The most intensive day use in the Lower Bear Trap Area occurred at an undeveloped site at the confluence of Hot Springs Creek and the Madison River."



"The intensive use in this area is evident even when no recreationists are present because of the extremely rough, rutted, multiple roads at the site."



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A look at Table 1 indicates that the Bear Trap Primitive Area received more use entering from the Lower Bear Trap Area than it did from the Upper Bear Trap Area. Much of the use that was observed entering from the Lower Bear Trap was day use by fishermen but there was some overnight use from backpackers. Many of the recreationists entering the Primitive Area from both the Upper and Lower Bear Trap Areas expressed a concern about rattlesnakes.

5. McAtee Bridge

The boat launch at McAtee Bridge is private land that is used as a public fishing access site through a cooperative agreement between the private landowner and the Montana Department of Fish and Game. Aside from the primitive boat launch and some garbage cans, there are no facilities. Most of the recreationists launching boats at McAtee Bridge float 11.5 miles to Varney Bridge. Approximately 40 percent of the river frontage between McAtee and Varney is land administered by BLM. It is because of this BLM river frontage and an interest in gaining information about this important aspect of recreational use on the Madison River, that the count of boats launching at McAtee Bridge was undertaken.

Table 3 indicates that the greatest number of boats observed to be launched at McAtee Bridge was 34 on Saturday, July 9, 1977. The high use in early July was probably due to recreationists who scheduled their vacation at that time in the hopes of being on the river at the time of the salmon fly hatch. The floating use between McAtee and Varney is strictly for fishing. Not one non-fisherman was observed launching a boat at McAtee Bridge throughout the entire season. Most of the boats launched at McAtee are McKenzies, double ended river boats owned, for the most part, by professional fishing guides. The guides work out of tackle shops in Ennis and West Yellowstone.

Any opinions that the guides volunteered were recorded, but the interviews at McAtee Bridge were restricted to the guides' clients and to individuals who were floating the river without guides. Seventy-two percent of the floaters interviewed at the McAtee Bridge were with an outfitter. Table 13 suggests that recreationists who are with an outfitter are, on the average, on shorter vacation trips, spend less time in the area, have had fewer previous visits and spend a great deal more money than recreationists who are not with an outfitter. Table 15 indicates that recreationists who are with outfitters spend roughly five times as much money per person per day as recreationists who are not with an outfitter.

B. The Grazing Allotments and BLM's Ennis Lake Boat Launch

1. The Allotments

Table 5 indicates that allotment number 0444 received the greatest number of recreational visits of all of the BLM grazing allotments within the study area. Most of the observed use was day use by

1. The first part of the report is a general introduction to the subject of the study. It discusses the importance of the study and the objectives of the research. It also provides a brief overview of the methodology used in the study.

2. The second part of the report is a detailed description of the methodology used in the study. It discusses the data sources, the data collection methods, and the data analysis methods. It also provides a brief overview of the results of the study.

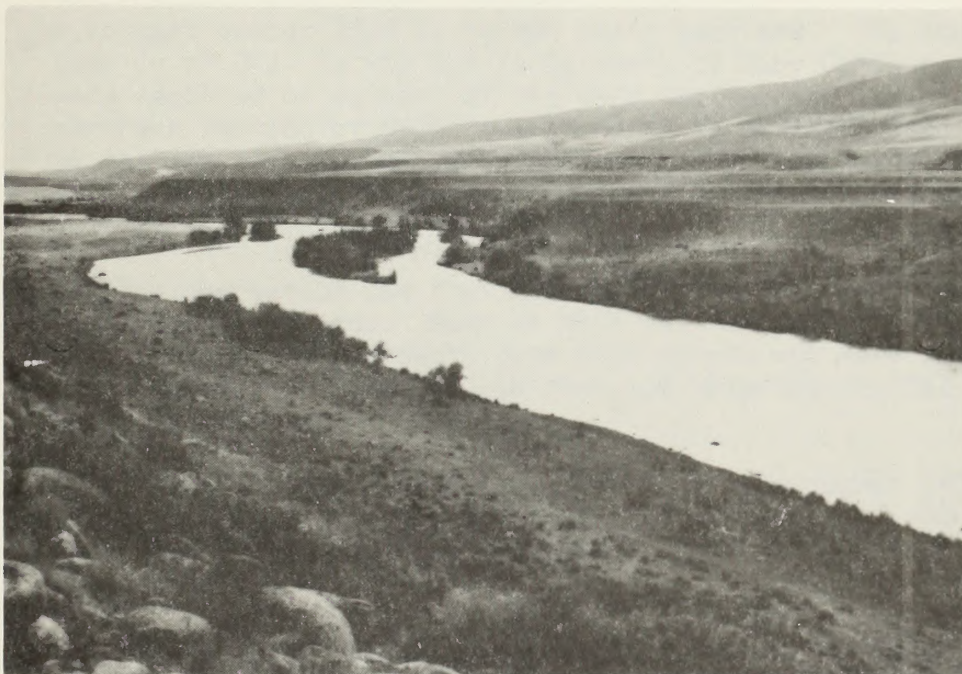
3. The third part of the report is a detailed description of the results of the study. It discusses the findings of the study and the implications of the findings. It also provides a brief overview of the conclusions of the study.

4. The fourth part of the report is a detailed description of the conclusions of the study. It discusses the findings of the study and the implications of the findings. It also provides a brief overview of the conclusions of the study.

5. The fifth part of the report is a detailed description of the conclusions of the study. It discusses the findings of the study and the implications of the findings. It also provides a brief overview of the conclusions of the study.



Allotment number 0444. Allotment number 0457
is directly across the river.



The Madison River looking south from allotment
number 0522.

bank fishermen, but it was not uncommon for fishermen to camp along the river. Twenty percent of the observed recreationists on 0444 were camping. Floaters also make use of 0444. This allotment is approximately midway between McAtee and Varney Bridges and is a popular launch spot for floaters. Some of the West Yellowstone fishing guides also used 0444 as a take out spot for their boats during the summer season of 1977. One of the major attractions of this allotment is that some of the only large trees in the section of river between Quake Lake and Varney Bridge are growing on the riverbank at this point.

Allotment number 0524, which is adjacent to 0444, received a consistent amount of steady recreational use. Number 0524 is a popular camping spot for fishermen. Sixty percent of the fishermen observed on 0524 were camping.

Allotment number 0457 is directly across the river from 0444. The only use ever observed on this allotment was a large party of fishermen camping on the river over the Labor Day weekend. Access to 0457 is extremely difficult.

Allotment number 0529 is in two basic sections. The southern section of 0427 is the BLM lands north of Ruby Campground that were reported on as part of the West Madison Recreation Area. The northern section of 0529 is just north of McAtee Bridge. Access to this section is gained by parking in the rancher's yard and walking to the river. All of the recreation use that was observed on 0529 was day use by fishermen.

All the recreation use that was observed on allotment number 0522 occurred on weekends. Much of this use was by residents. Much of the use from non-residents came from people who were staying at Ruby Campground. All the use that was observed on 0522 was day use by fishermen.

All of the use that was observed on allotment number 0452, which is adjacent to number 0522, also occurred on weekends. For the most part the recreational use observed on 0452 was overnight use by non-resident fishermen.

Allotment number 0494 is just south of one of the Forest Service campgrounds at the West Fork of the Madison River. All of the use occurring on 0494 was day use by fishermen who were staying at the Forest Service campground or in private resorts in the West Fork Area.

Grazing regulations pertaining to public lands state that: "A grazing lease does not alter or restrict the authorized public use of the leased land including, but not limited to, hunting, fishing, camping, or hiking on such lands in accordance with the laws of the United States or of the State in which the lands are located, nor may the lessee interfere with the proper exercise of such rights. Neither shall the lessee maintain locked gates, signs, or other de-

VICES which prevent or interfere with public use of the leased lands." But the public may not enter private lands without the consent of the landowner. The public cannot cross private land to reach public land where no public thoroughfare exists, unless the landowner's permission has been obtained.

As figures 9-11 display, access to almost all of the public land in the grazing allotments within the study area is through private land. The landowners then have the option of preventing access through their private lands to the public lands. None of the landowners that hold grazing allotments within the study area are exercising that option. Typically the recreationists who were interviewed on the grazing allotments have been using the area for years and did not have permission of the landowner to trespass. Most of the recreationists who were interviewed while on the grazing allotments stated that they first found out about the access into the allotments through the proprietors of tackle shops in Ennis or West Yellowstone or just by poking around along the river looking for ways to get into it. For the most part the recreationists who were interviewed on the allotments had no idea that there was any public land in the area at all.

Most of the allotment holders within the study area were contacted. For the most part, they were not too concerned about the recreation use occurring on the allotments. Recreationists seem to be generally conscientious about closing gates and show general respect for the landowners. The holder of allotment number 0522 expressed some concern about the multiple roads that fishermen were developing on 0522, and the holder of allotment 0529 was concerned about litter. Litter left by recreationists is somewhat of a problem on all of the allotments.

It is difficult to put a value on recreation use. If you multiply the total estimated number of recreational visits occurring on the grazing allotments within the study area (1609 visits) times the average daily expenditure per person in Montana of all recreationists interviewed on the Madison who were not an outfitter (\$6.10 per day), you arrive at a figure of \$9,815.00. The grazing fees for the seven allotments for which use figures were estimated comes to a total of \$1,178.00.

This study would indicate that grazing and recreation are compatible uses. Only one of the 346 recreationists interviewed, including recreationists who were interviewed on the grazing allotments, mentioned grazing or cattle as a problem.

2. BLM Ennis Lake Boat Launch

The BLM boat launch on Ennis Lake is not a grazing allotment, but it has been grouped with the allotments throughout this report because user data was collected in the same manner. Table 5 indicates that the Ennis Lake boat launch received very light recreation use during the 1977 summer season. The boat launch is on the

southern end of the lake and recreationists seem to prefer the northern end of the lake because it is deeper, clear of weeds, and there are beaches in the area. As was mentioned in the resource section though, the BLM boat launch is strategically important because it is the only public access point at which recreationists who have floated the Channels can take out their boats.

Perhaps one reason that the launch site received such light use is that it is not signed in any way. There are no signs on the main highway to indicate the presence of the launch site, and there is nothing to indicate that the launch site itself is public land. There is a private resort located quite near the launch site, and most recreationists seem to assume that the BLM launch site is part of the private resort.

The only facility at the launch site is an old pit toilet that is presently full and has a definite lean to the east. High weeds limit the amount of space available for maneuvering boat trailers.

C. General Conclusions for all BLM Lands Within the Study Area

A perusal of all the data that has been presented reveals some clear patterns about the recreation use that is occurring on BLM lands within the Madison River Corridor. A large majority of the recreationists interviewed on the river were non-residents. Roughly a third of these non-residents came from California, with the rest coming from a large mix of States and Canadian Provinces. This large representation of non-residents no doubt reflects the national fame of the Madison River.

Table 9 and 12 indicate that most of the recreationists interviewed were coming to the Madison, and they were coming to fish. Typically, recreationists would state that they had come to fish the Madison and other blue ribbon trout streams in the area. The proximity of Yellowstone Park and other natural and historical attractions in the area certainly affects recreation patterns on the Madison, but the responses of the recreationists suggest that the Madison itself is the main attraction.

Occasionally recreationists were encountered who were visiting the Madison for the first time, but most of the recreationists interviewed had been visiting the Madison for a number of years. The overwhelming majority of the recreationists interviewed expressed an intention to return. Roughly one third of the recreationists interviewed were part of a larger group. For this third the Madison was a meeting place for friends and relatives.

Fifty percent of the recreationists who were interviewed on the Madison stated that they had no dislike about the area. The other fifty percent expressed a variety of dislikes; some of them concerns about the quality of fishing on the Madison. These concerns will be discussed in detail in the next section of this report.

There was a strong common consensus among those interviewed about access and recreation facilities. An overwhelming majority of those recreation-

ists interviewed felt that access and recreation facilities on the Madison were adequate. For the most part, the reasoning was that more access and facilities would bring more people, and more people are considered undesirable. Most of the recreationists interviewed on the Madison seemed to be seeking a primitive, unconfined, uncrowded, recreational experience.

Some of the few people who favored more access on the Madison did so for the same reason that most people did not favor more access. These few people expressed the opinion that more access would spread out the existing use, therefore decreasing the number of people using each area.

Though the great majority of the recreationist interviewed did not favor the construction of any more facilities, many recreationists in the campgrounds stated that they would like to have some firewood made available for campers, and some recreationists at the undeveloped sites stated that they thought that pit toilets should be provided.

Another clear response that surfaced with the data concerned the awareness of BLM land and BLM management efforts. BLM has a very obvious identity problem. A common response to the question about awareness of BLM lands was "BL what?". Recreationist would often respond that they knew the lands were Forest Service or Park Service or some government agency, but they weren't sure which one. Approximately 60 percent of all the recreationists interviewed were unaware that they were on BLM lands. An overwhelming 80 percent were unaware that the BLM provides recreation maps indicating the location of National Resource Land.

Only 10 percent of the recreationists who were interviewed had ever attempted to locate any of the undeveloped BLM lands. Roughly 60 percent of those recreationists who had attempted to locate undeveloped BLM lands had had difficulty locating them.

D. The River

To spend a summer on the Madison River is to spend a summer talking about fishing even if you are a non-fisherman. Fishing and the Madison River are synonymous terms, and the fishing, according to many of the recreationists that were interviewed, is not as good as it was. Many of the recreationist stated that there seem to be as many fish in the river as there ever were but there aren't as many large fish, and it is the chance of catching a large fish that accounts for much of the fame of the Madison. When asked what they thought accounted for this perceived deterioration in the quality of the fishing, almost all of the fishermen responded with some variation of the same basic theme: pressure. Too many people; too much fishing pressure.

For many bank fishermen the perceived source of much of the pressure is the boats. The Montana Department of Fish and Game has restricted fishing from boats in the section of the Madison River between what is now Quake Lake and McAtee Bridge since 1951. In 1969, the Department of Fish and Game opened up the entire river to fishing from boats. Because of

numerous complaints from bank fishermen, the Department of Fish and Game returned to a restriction on boats in 1970. Since 1970 Fish and Game has alternated the areas in which fishing can take place from boats from year to year. One year the boats can float from Quake Lake to McAtee Bridge, the next year from McAtee Bridge to Ennis, then Quake Lake to McAtee Bridge again, and so forth.

The reason that Fish and Game restricts the boats is not out of a concern about pressure, but because of a concern that the boats interfere with bank fishermen. During the summer of 1977, the boats were floating from McAtee Bridge to Ennis. Since this section of the river is much less developed than the section between Quake Lake and McAtee Bridge, there was not that much contact between the boats and bank fishermen. The bank fishermen who were interviewed during the summer of 1977 were not that much concerned about interference from boats. They were concerned about the pressure. The theories are endless, and all are delivered with great fervor. The basic theory expressed by boat fishermen though is that unlike bank fishermen the boats can fish every "nook and cranny" and there is no place left for the fish to hide and breed. Since most of the boats are owned by commercial outfitters, and the outfitters charge a handsome fee, the charge becomes that the boats "reserve the river for the rich".

Bait fishermen and "hardware" fishermen also take their share of the blame for the perceived increase in fishing pressure. Some fly fishermen maintain that it is difficult for bait fishermen to release fish without killing them. Lures, with their treble hooks are also said by some to harm the fish. The issue here becomes that of the "meat" fisherman as opposed to the "sport" fisherman. According to some sport fishermen, the meat fisherman fishes to keep his limit of fish while the sport fisherman fishes for the pure joy of it and returns all or most of his fish to the river to be caught again.

There are many sides to all these discussions. Some people maintain that there are as many large fish in the Madison as there ever were, but since there are many more fishermen, each fisherman is catching less fish. The whole sport fishing issue raises the question of how many times in its life a fish can be yanked out of the water. But whatever the basis, the concern is there.

In some respects, all this is well beyond the scope of this study, and yet as was mentioned in the resource section of this report, fishing and recreation patterns on the Madison River are inextricably interrelated. Fishing and the economy of the Madison Valley are also inextricably interrelated. At \$6.10 per person per day the 26,146 estimated recreational visits on BLM land between July 1 and September 5 of 1977 amounts to \$159,491.00. This figure does not take into account the use occurring on non-BLM lands or the float use on the river.

If fishing use on the Madison River were to decline it is not likely to be replaced by any other kind of recreation use. The Madison has been described as one long riffle. Its broad, shallow character makes it ideal for fly fishing but less than ideal for many of the recreational uses that rivers are traditionally put to. The Madison has no lazy bends with good

swimming and fishing holes, and it's too shallow to be a pleasant float for the recreational boater. Many campers find the open dry landscape of the Madison River below Quake Lake unpleasant, and few non-fishermen spend more than one night camping in the area.

All this is meant to suggest that if the quality of fishing isn't maintained in the Madison River, there are likely to be repercussions which will be felt in the economy of the whole Madison Valley.

CHAPTER VI

RECOMMENDATIONS

A. The Four BLM Areas of Concentrated Use

1. West Madison

- a. More signing is needed to indicate the presence of Ruby Campground and Picnic Area and to assist recreationists in locating the area.
- b. The primitive road along the river just south of Ruby Campground should be either maintained or closed to all motor vehicles in order to prevent further resource damage.
- c. The number of people using Ruby Campground should continue to be monitored, but until crowding becomes a problem, no camping limits should be enforced.

2. South Madison

- a. A sign indicating the location of the recreation area should be placed at the point at which the recreation area access road crosses the old highway.
- b. The recreation area access road should be maintained before further resource damage occurs.
- c. Most of the picnic tables and fire grates at Palisades Picnic Area should be removed.
- d. Tent pads should be constructed at some of the sites in Trout Campground.
- e. Brook Camping Unit should be either opened, or dismantled and removed. The overgrown, unkempt appearance of Brook Unit adds to the general "desolate" appearance of Trout Campground. Though use at Trout Campground was never observed to exceed capacity, it is receiving enough use to consider opening Brook Camping Unit. The opening of Brook Unit would give campers a chance to spread out, therefore achieving some added measure of privacy. Perhaps tent pads could be constructed at Brook Unit, and Brook could be maintained as a "tents only" camping area.

3. The Upper Bear Trap

- a. Montana Power and BLM administrators need to meet in order to decide on priorities and responsibilities within the Upper Bear Trap Area. Is there enough space within the canyon for both power production and recreation use? If not, which use should be maintained

and which discontinued. If so, which agency is to be responsible for managing the recreation use.

- b. BLM should discontinue distributing the brochure that describes the Upper Bear Trap Area as the best approach to the Bear Trap Canyon Primitive Area.
- c. The Bear Trap Primitive Area Trail should be routed above and around the hazardous power plant overflow chute in some manner. In the meantime, the possibility of closing the trail should be considered until this hazard is eliminated.
- d. Another possibility that needs to be considered is that of closing the entire road in the Upper Bear Trap Area to vehicular use by recreationists. A parking area could be constructed at the undeveloped camp site that is approximately $\frac{1}{2}$ mile from the mouth of the canyon. All recreation use beyond that point could be restricted to foot travel.

4. The Lower Bear Trap

- a. A thorough litter pick-up should be undertaken in the entire area.
- b. Most of the picnic tables and fire grates in the Red Mountain Picnic Area should be removed.
- c. The undeveloped site at Hot Springs Creek should be completely graded and revegetated. One access road should be maintained in the area.
- d. Roads at the other undeveloped sites in the area where resource damage is occurring should either be closed to vehicular use or maintained.
- e. Consider installing pit toilets at Hot Springs Creek, the Bear Trap Primitive Area Trailhead, and at the series of undeveloped sites on the west side of the river north of the Red Mountain Bridge.
- f. Consider developing individual sites with picnic tables and fire grates along the Bear Trap Primitive Area access road and at the series of sites on the west side of the river just north of the Red Mountain Bridge.

B. The Allotments and BLM Ennis Lake Boat Launch

1. The Allotments

- a. A thorough litter pick-up should be undertaken on all the allotments where recreation use is occurring.
- b. Because of the mixed ownership, nothing, such as signing of the

public lands, should be undertaken that would encourage more recreational use on the allotments.

- c. Consider recommending that the holder of Allotment #0522 post the private lands in order to prevent the further proliferation of roads within the allotment.
- d. Continue monitoring the recreation use on #0444 and #0542, and take steps to manage it if use increases.

2. BLM Ennis Lake Boat Launch

- a. Remove old pit toilet at site.
- b. Cut weeds periodically.
- c. Erect sign on main highway indicating the presence of the boat launch.
- d. Erect sign at the site identifying the boat launch as public land.

C. General Recommendations All BLM Land

1. If firewood is no longer to be provided, remove the firewood corrals at all of the BLM campgrounds and picnic areas.
2. Undertake a public relations program to inform the public about BLM recreation management efforts.
3. Undertake efforts to establish trees and shrubs in the campgrounds if indigenous vegetation can be maintained without the aid of a permanent irrigation system.
4. Continue to provide campgrounds without charging camping fees.

D. The River

1. Recognize that many of the recreationists on the Madison are concerned about the social and biological carrying capacity of the river.
2. Consider permanently restricting fishing from boats between Quake Lake and McAtee Bridge.
3. Consider a fly fishing only stretch of the Madison, perhaps between Varney Bridge and Ennis.
4. The river survey should be repeated again next year, but on a less intensive scale.
 - a. Present survey did not sample heavy use which normally occurs during salmon fly hatch.

- b. Use occurring near the West Fork of Madison River needs to be surveyed.
 - c. This is the first user survey of the Madison River. A follow-up survey is needed to verify and refine this year's findings.
5. Undertake a Wild and Scenic River Study of both the Upper and Lower Madison.

APPENDIX A

VEHICLE AND/OR FLOATER OBSERVATION SHEET

Vehicle Code: 1 - Auto 7 - Motorcycle
 2 - Pick-up 8 - Mobile home
 3 - Pick-up w/camper 9 - Van
 4 - Pick-up w/camper shell 10 - Bus
 5 - Car or pick-up w/trailer 11 - Other
 6 - 4-wheel drive vehicle

*Denotes vehicle putting boat in water.

**Denotes boat observed/no vehicle.

n/o Denotes not observed.

Location _____

Date _____

Weather _____

Day _____

Sampling period _____

	Vehicle Code	Number of Occupants	Time	State/County if Montana	Activities Participation
1					
2					
3					
4					
5					
6					
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APPENDIX B

RECREATION USE SURVEY

Location _____ Day _____ Date _____ Weather _____

1. Origin of trip _____.
2. Transportation mode:

1. Auto	7. Motorcycle
2. Pick-up	8. Mobile home
3. Pick-up w/camper	9. Van
4. Pick-up w/camper shell	10. Bus
5. Car or pick-up with trailer	11. Other _____.
6. 4-wheel drive vehicle	
3. Number of people in vehicle _____.
4. Destination (s) of trip _____.
5. Length of trip in days _____.
6. Length of stay in Montana _____.
7. Length of stay in (area) _____.
8. Type of lodging while in (area):
 1. Motel: Location, Number of nights _____.
 2. Campground:

<u>Type of Facility</u>	<u>Name of Camp</u>	<u># of Nights</u>	<u>Type of Shelter</u>
1. BLM	_____	_____	1. Tent _____
2. BLM undeveloped	_____	_____	2. Trailer _____
3. USFS	_____	_____	3. Camper _____
4. Fish & Game	_____	_____	4. Camper Shell _____
5. Private	_____	_____	5. Van _____
6. Other	_____	_____	6. Mobile home _____
			7. None _____
9. Primary activities in (area)

<u>Activity</u>	<u>Where Undertaken</u>
-----------------	-------------------------
10. Are you with an outfitter or guide

1. _____ yes	2. _____ no
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11. Are you spending money on this trip for:

1. _____ food and drink	5. _____ sporting goods
2. _____ lodging	6. _____ guide or outfitter
3. _____ gas, oil, etc.	7. _____ other _____
4. _____ sporting license(s)	
12. Total estimated expenditure for this trip per vehicle _____.

13. Estimated expenditure per vehicle in Montana_____.
14. How many times have you been here before?_____?
(If one or more prior visits) when did you first visit this area?_____.
15. Do you feel there is adequate access to (this area)? 1.____yes 2.____no.
If no, why?_____.
16. Do you feel recreation facilities in (this area) are adequate? 1.____yes 2.____no.
If no, why?_____.
17. What do you like most about (this area)?
18. What do you dislike most about (this area)?
19. Would you return to (this area)? 1.____yes 2.____no.
20. a. Are you aware that you're on public lands administered by the BLM?
1.____yes 2.____no
b. Are you aware that you'll be floating past BLM lands adjacent to the river?
1.____yes 2.____no
21. a. Have you ever attempted to locate BLM lands other than developed campsites?
1.____yes 2.____no
b. If yes, have you experienced difficulty in identifying those undeveloped
BLM lands to recreate on: 1.____yes 2.____no
22. Are you aware that BLM provides recreation maps indicating the location of
National Resource Land? 1.____yes 2.____no
23. a. Is respondent part of a larger group? 1.____yes 2.____no
b. If yes, how large a group?_____.
24. Additional comments:

This intern report was read and accepted by a staff member at:

Agency: Bureau of Land Management-Butte District

Address: Ibey Building, N. Dillon Box 1048
Dillon, Montana 59725

This report was completed by a WICHE intern. This intern's project was part of the Resources Development Internship Program administered by the Western Interstate Commission for Higher Education (WICHE).

The purpose of the internship program is to bring organizations involved in community and economic development, environmental problems and their students in the West for the benefit of all.

For these organizations, the intern program provides the problem-solving talents of student manpower while making the resources of universities and colleges more available. For institutions of higher education, the program provides relevant field education for their students while building their capacity for problem-solving.

WICHE is an organization in the West uniquely suited for sponsoring such a program. It is an interstate agency formed by the thirteen western states for the specific purpose of relating the resources of higher education to the needs of western citizens. WICHE has been concerned with a broad range of community needs in the West for some time, insofar as they bear directly on the well-being of western peoples and the future of higher education in the West. WICHE feels that the internship program is one method for meeting its obligations within the thirteen western states. In its efforts to achieve these objectives, WICHE appreciates having received the generous support and assistance of the National Endowment for the Humanities, the Washington State Office of Community Development CETA Program, the Colorado Department of Labor and Employment; and by more than one hundred and fifty community agencies throughout the West.

For further information, write Bob Hullinghorst, Director, Resources Development Internship Program, WICHE, P. O. Drawer 'P', Boulder, Colorado 80302 or call (303) 443-6144.

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